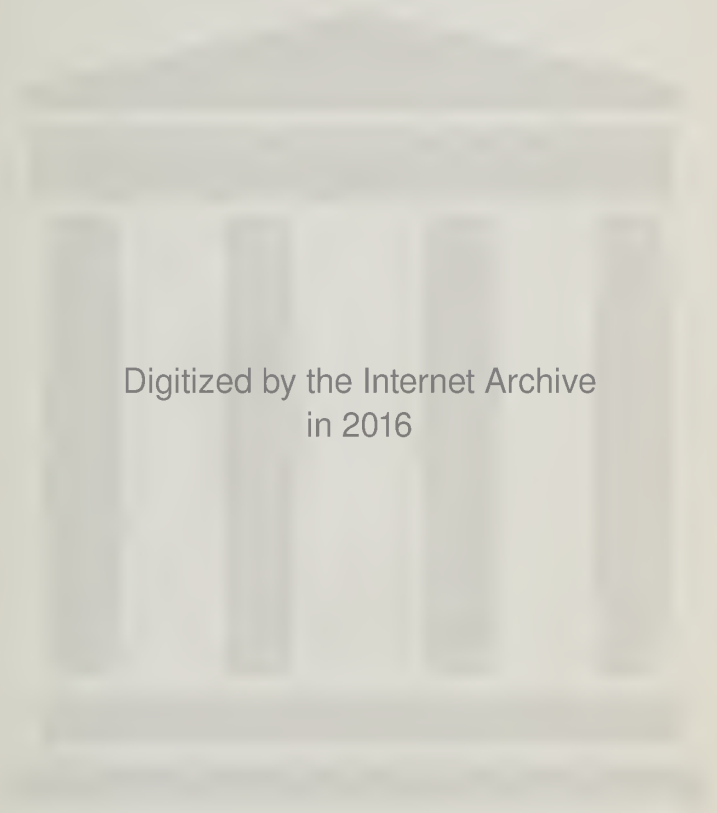
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Annual Report for 1952

of

THE PRESBYTERIAN HOSPITAL

at

COLUMBIA-PRESBYTERIAN MEDICAL CENTER

Gifts and Bequests

The activities of the various hospitals at the Medical Center are supported to a substantial extent by the income from bequests and devises from friends of the various hospitals, who have desired to insure the continuation of their help to the sick of New York.

Bequests and devises may be made in the following form:

FORM OF BEQUEST

I give and bequeath to The Presbyterian Hospital in the City of New York the sum ..... dollars ($.....) to be applied to the use and benefit of the said Hospital, under the direction of the Trustees thereof.

FORM OF DEVISE

I give and devise to The Presbyterian Hospital in the City of New York all that, etc. (describe the property), to be had and holden to the said The Presbyterian Hospital in the City of New York, its successors and assigns, for the use and benefit of the said Hospital.

In case it is desired to make the bequest to the Hospital as a memorial "In memory of ....." may be added to the Form of Bequest or Devise.

In all instances the gift should be to "The Presbyterian Hospital in the City of New York" in its full corporate name even when mentioning the particular use to which it is to be put.

The corporation will, because of the consolidation of the corporations formerly administering the Medical Center hospitals, become entitled to gifts to the former corporations. It will, therefore, not be necessary to change the provisions of any will naming The Babies Hospital of the City of New York, Neurological Institute of New York or New York Orthopaedic Dispensary and Hospital as beneficiary.

EDWARD C. BENCH,
Treasurer.

RM 5 7
.A47 1952

MEDICAL CENTER

EIGHTY-FOURTH ANNUAL REPORT

THE PRESBYTERIAN HOSPITAL
IN THE CITY OF NEW YORK

INCLUDING

BABIES HOSPITAL
HARKNESS PAVILION
INSTITUTE OF OPHTHALMOLOGY
MARY HARKNESS HOME
NEUROLOGICAL INSTITUTE
N. Y. ORTHOPAEDIC HOSPITAL
PRESBYTERIAN HOSPITAL
SLOANE HOSPITAL FOR WOMEN
SQUIER UROLOGICAL CLINIC
VANDERBILT CLINIC

BROADWAY AND 168th STREET
NEW YORK 32, N. Y.



For the Twelve Months ended December 31, 1952

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Origin and Functions of the Medical Center

The Medical Center comprises a group of long established hospitals of high standing which, in affiliation with the College of Physicians and Surgeons of Columbia University, furnish an integrated program to provide the highest quality of medical care for the sick and injured, to advance knowledge regarding the cause, prevention and treatment of disease and disability, and to train men and women in the professions of medicine, dentistry, nursing, public health, and allied fields. Through the affiliation between the hospitals and the University the members of the staffs of the hospitals are nominated by Columbia University, and teaching and research are conducted in all of the hospitals.

A brief description of the origin and of the functions of each hospital unit of the Medical Center is given in the following paragraphs.

The Presbyterian Hospital

The Presbyterian Hospital, founded as a general hospital in 1868 by James Lenox, was originally located on the block bounded by Madison and Park Avenues between 70th and 71st Streets. On April 25, 1911, Presbyterian Hospital made its original arrangement with Columbia University's College of Physicians and Surgeons for coordinating the care of the sick with the educational and research program of the University. Now Presbyterian Hospital is the largest single unit of the Medical Center. The Hospital occupies a 22-story building in which are the wards of the medical and surgical services, obstetrical and gynecological services, urological service, ear, nose and throat service, dermatological service and the orthopedic surgery service. To provide for personal contact between doctor and patient, the Hospital is divided into floor units of between 60 and 70 beds, each unit fully equipped and in charge of the special staff of doctors, nurses, social workers and dietitians.

The Presbyterian Hospital in the City of New York is the corporate title for all the voluntary hospitals and clinics at The Columbia-Presbyterian Medical Center. The group consists of the following units:

Babies Hospital

Babies Hospital, 167th Street and Broadway, founded in 1887, provides for general medical and surgical care of infants and children up to their thirteenth birthday, and care for premature babies. The total capacity of the Hospital is 192. One floor is devoted to the care of private and semi-private patients. Both outdoor and indoor playrooms are provided for convalescent children. Laboratories are operated for the routine and research work of the Hospital in pathology, microbiology and chemistry. An X-ray and fluoroscopic department is operated under the direction of the Hospital radiologist. An outpatient department is maintained in Vanderbilt Clinic by the visiting and house staff of the Hospital. In addition to the general medical and surgical clinics there are special clinics for children suffering from heart disease, tuberculosis, epilepsy, asthma and other diseases.

Harkness Pavilion

Harkness Pavilion, erected at the time of the establishment of the Medical Center at 180 Fort Washington Avenue, is available for the accommodation of 294 adult private patients of the attending staff.

The Mary Harkness Convalescent Home

Mary Harkness Convalescent Home, King Street, Port Chester, N. Y., opened in 1937 to provide convalescent care for adults and the new Strong Memorial Wing was opened in 1952 to care for handicapped children whose families are unable to provide the convalescent care following poliomyelitis, orthopedic, medical and surgical procedures. In a beautiful country setting there are facilities for convalescent care available for 35 adults and 22 children.

The Institute of Ophthalmology

Institute of Ophthalmology, 635 West 165th Street, opened in 1933 has complete facilities for the medical and surgical treatment of adult and child patients with diseases of the eye. The bed capacity is 92 of which 45 are ward beds. On January 1, 1940, the work of the Herman Knapp Memorial Eye Hospital was taken over by the Institute.

The Neurological Institute

Neurological Institute, 168th Street and Fort Washington Avenue, one of the first nongovernmental hospitals in this country for the treatment of nervous diseases, was founded in 1909. It moved from East 67th Street to the Medical Center in 1929. Its affiliation with The Presbyterian Hospital has made possible a broad basic program of teaching and research in neurology and in the treatment of diseases of the nervous system and surgical conditions of the brain and nervous system. Facilities are provided for 210 bed patients of which 123 are for ward patients.

New York Orthopaedic Dispensary and Hospital

The New York Orthopaedic Dispensary and Hospital opened its first dispensary in 1866 largely as a result of the interest Theodore Roosevelt, whose son and namesake became President, had in the care of the crippled. In succeeding years, the dispensary grew into a hospital with beds for ward and private patients. In 1911, the first Spine Fusion Operation for Potts Disease (tuberculosis of the spine) was performed by Dr. Russell A. Hibbs. This successful operation opened an entirely new era in the treatment of this disease. The Orthopaedic Dispensary and Hospital was located in its own buildings at 420 East 59th Street until December 1950 when it moved to the Medical Center. On the 5th floor of the main building, 622 West 168th Street, facilities are available for the care and treatment of orthopedic conditions and fractures in children and adults.

The School of Nursing

The School of Nursing was founded in 1892 for the training of nurses. Since 1935 its educational program has been under the supervision of the Department of Nursing of the Faculty of Medicine of the College of Physicians and Surgeons of Columbia University. A three-year course in nursing is conducted, and the degree of Bachelor of Science is offered by the University to those properly qualified.

The Sloane Hospital for Women

Sloane Hospital for Women was built at West 59th Street and Amsterdam Avenue and presented to Columbia University by Mr. and Mrs. William D. Sloane in 1886. It now occupies three floors of The Presbyterian Hospital building for ward and semi-private patients and two floors in Harkness

Pavilion for private patients. The total bed capacity is 192 of which 116 are ward beds. Patients, other than emergencies, are admitted through the Vanderbilt Clinic. The deliveries in the Hospital number about 3,500 a year.

The J. Bentley Squier Urological Clinic

The J. Bentley Squier Urological Clinic occupies the 10th floor of The Presbyterian Hospital building and the 10th floor of Babies Hospital. There are 67 beds for the care of adults and 17 beds for children. There are laboratories fully equipped to do diagnostic, X-ray, bacteriological, pathological, fluoroscopic, and research work. This unit has two large, especially equipped, operating rooms. The urological outpatient department is in Vanderbilt Clinic.

Vanderbilt Clinic

Vanderbilt Clinic, Broadway and 167th Street, presented to Columbia University by the Vanderbilt family in 1888, is the common outpatient department and admitting service for all the wards of all the units of The Presbyterian Hospital. It is a fully equipped dispensary offering complete medical, surgical and specialty services. Eligibility to the Clinic is determined by the admitting physician and the clinic interviewer and is limited to those unable to afford a private physician. The Group Practice Clinic, organized in 1946, has proved a forward step in the diagnosis and treatment of patients.

Other institutions located at the Medical Center are —

The New York State Psychiatric Institute and Hospital, a 200 bed hospital, built and maintained by the State of New York with provisions for the study and treatment of all types of psychiatric disorders.

The Francis Delafield Hospital, built and maintained by the City of New York, is a 300 bed hospital for the treatment and study of cancer.

The Washington Heights Health and Teaching Center built and maintained by the City of New York.

REPORT
of the President

Report of the President for 1952

This brief summary of the year here in The Presbyterian Hospital at the Columbia-Presbyterian Medical Center is presented with an expression of deep appreciation to our professional staff, nurses, other personnel, and the many loyal contributors who shared in our rewarding work making the achievements of the past year possible.

The reports of the Treasurer, Directors of Services and the Officers of the Women's Auxiliaries give a picture of the magnitude of the task which our founders set for us in the creation of the Columbia-Presbyterian Medical Center and of the responsibility placed upon The Presbyterian Hospital for the care of the sick, research, and teaching.

With the phenomenal advances in every branch of medical science, life expectancy has nearly doubled in the past fifty years. Control of killing diseases such as tuberculosis, pneumonia, diphtheria, scarlet fever and many other infectious maladies has sharply reduced death rates.

Hospitalization, once a dreaded and prolonged experience, is now in our hospitals a matter of days. Sixty-five years ago the average hospital stay was 52 days; today, at Presbyterian Hospital, the average is 12.5 days. Intensive care in a shorter period of time is, however, a contributing factor to the increasing cost of patient care.

Financial Results — Continued Support Essential

As has been pointed out before, there is a tendency to forget that no one, regardless of what he may pay, ever pays full value for his hospital stay. Also, a frequently forgotten fact is that a voluntary hospital is a non-profit agency accepting patients regardless of their ability to pay and further, that a hospital must be ready for any emergency 24 hours a day and 365 days a year. A voluntary teaching hospital assumes large responsibility for leadership in medical problems, for safeguarding the community health, for research and the training of doctors, nurses and others.

These demands, which at The Presbyterian Hospital exceed those of any other voluntary hospital in America, may be illustrated by the following:

In 1952 The Presbyterian Hospital . . .

provided	440,207 days of hospital care
for	35,151 in-patients
and clinic care for	46,393 out-patients
who made	386,276 clinic visits
of which	101,792 clinic visits were FREE
and	78,039 hospital days were given FREE
this cost	$ 9,129,000 for salaries
and	5,664,000 for supplies and services
totaling	$14,793,000
we received	$10,156,000 from patients
	3,281,000 from endowment income and gifts
and	1,240,000 from other services
totaling	$14,677,000
the difference	$116,000 must be made up from General Funds

An example of the effects of inflation on our Hospital is shown below:

Total Operating Expenses

1942	$ 4,698,000
1952	14,793,000

Endowment Income for General Purposes

1942	25% of our expenses
1952	15% of our expenses

Contributions

1942	5% of our expenses
1952	3% of our expenses

We need continued support from our many friends not only to meet this inflationary trend but because each forward step in Medicine brings vastly increased opportunities for service, the necessity of more fundamental research, more intricate procedures, and more elaborate ancillary services so vitally essential in the progress of medical science.

Reimbursement Rates for Hospital Care

Negotiations are still being carried on with the Associated Hospital Service of New York, the City of New York, the State of New York and many other agencies with a view of establishing more realistic reimbursement rates for the care of patients which have not kept pace with the rising costs of hospital care.

Sixty percent of our patients have some form of Blue Cross or commercial hospitalization insurance which emphasizes the importance of adequate and realistic reimbursement rates from these sources in order that a high quality of patient care may be continued.

New York City's rate of payment for indigent patients is far below the cost of their care. An appeal has been made to the City of New York for an increase in its rate of payment for in-patient ward care as well as a plea for financial assistance in the care and treatment provided many City cases in the out-patient clinics.

The Spirit of Cooperation

All persons affiliated with a hospital, and particularly a great medical center, are dedicated to the service of the needs of mankind. While meeting the daily needs of patients there is always the atmosphere of the broad-gauged program for the future to keep abreast of medical science and the awareness of the efforts of scientists who are searching for the discovery which might radically change the practice of medicine and even find the cause and cure of the still baffling illnesses such as disorders of the heart, cancer, mental illness and the diseases of old age. In this atmosphere so charged with the vital purpose of life every member of the Medical Center family gives full cooperation and attention to his task whether it be in the maintenance of the facilities, equipment and records, or the direct care of the patient. The Hospital would be unable to maintain its leadership in service to the sick and injured without the wholehearted cooperation of all concerned.

A highly important example of the team work at the Medical Center is the common practice for the doctors to confer with each other on their cases informally as well as in the scheduled clinical conferences. The patient, often unaware of the procedure, has the benefit of consultation whenever it is indicated.

That we are able to give our patients individual attention and care is attested by the many letters received throughout the year. Nearly always the writer asks, "please thank all those who gave me such considerate and wonderful care." This is a tribute to the spirit and cooperation of all those working at the Medical Center.

Contributions

The Board of Trustees, professional staff, and personnel of the Hospital are profoundly grateful to the many individuals, foundations, corporations, associations and estate trustees who have contributed to the Hospital. Their contributions have enabled us to maintain our standards of medical care, have helped us meet the rising costs, and in addition through specific grants to conduct vital research which tends to produce good teaching and results in better patient care.

In a world of growing tensions it seems particularly appropriate that The Pauline A. Hartford Memorial Chapel, a gift of The John A. Hartford Foundation, Inc., was dedicated on June 25, 1952 in an impressive cere-

mony. The Chapel fills a long felt need as a place of beauty and reverence for the religious services of the Hospital and a place for worship and prayer for patients and their families, staff and personnel. The gift also includes an internal broadcasting system with an individual speaker for every bed so that patients can listen to Chapel services or their favorite radio programs.

It seems equally appropriate that the Strong Memorial Wing at the Mary Harkness Convalescent Home, Port Chester, New York, which provides additional facilities for the care of children, was dedicated on October 7, 1952. A gift made possible under the will of the late William E. S. Strong, a former member of the Hospital Corporation, in memory of his daughter, Martha Moulton Strong, who died at the age of nine, the Strong Memorial Wing provides important and necessary convalescent facilities for children.

The Hospital was indeed honored to have received as gifts the portraits of Dr. Allen O. Whipple, long the Director of the Surgical Service, and Dr. George F. Cahill, Director of the Urological Service. These portraits will always be reminders of their untiring efforts in behalf of humanity.

In 1952 we received $169,485 from the United Hospital Fund of New York and $123,166 from the Greater New York Fund, which are welcome sources of support year after year to so many voluntary hospitals and agencies.

Students

Teaching is the source of future leaders and its presence is emphasized by the fact that there are under the Faculty of Medicine of Columbia University 455 medical students, 139 dental students, 107 candidates for degrees in the School of Public Health and 314 students registered in the School of Nursing. In addition, there were 704 students from 22 affiliated schools of nursing who received instruction under the Department of Nursing in the various hospital and laboratory units of the Medical Center.

The total of medical, graduate, postgraduate, nursing, occupational therapy, physical therapy, dental, dental hygiene and public health students, visiting scholars, fellows and hospital residents runs to over 3,000 full-time and part-time students, a number much larger than is commonly understood.

Trustees

It is with the greatest sorrow we report the deaths of Mr. H. Rivington Pyne, an Honorary Trustee, and former member of the Board of the New York Orthopaedic Dispensary and Hospital and Mr. Johnston deForest who had served on the Board of Presbyterian Hospital for nearly 40 years. Their long and faithful service to the Hospital is written within the accomplishments of the years they gave of their time and talents.

During the year we welcomed nineteen new members to the Presbyterian Hospital Corporation.

The five Women's Auxiliaries, each serving specific areas of the Hospital in fund raising and projects for the benefit of the patients and the staff, are always alert to the overall needs of the Medical Center. The Hospital is indeed grateful to the members of these auxiliaries for their assistance in the constant endeavor to improve care of patients.

During the year the Board of Trustees appointed a Development Committee with Mr. Edward C. Bench, Treasurer of the Hospital, as Chairman. Aware of the impact of social and economic developments, this Committee will study future trends and needs of the Hospital and the means of meeting them.

A Committee of Hospital and University Trustees has been appointed for the 25th Anniversary Celebration of the opening of the Medical Center which will be held on October 12 and 13, 1953.

Professional Staff

On October 1, 1952, Dr. Albert R. Lamb retired from active practice, completing one of the longest periods of active connection with the Hospital of any member of the professional staff. In his capacity as Consultant, the Hospital will continue to have the benefit of his sage advice and counsel.

The three year term of office of Dr. Rustin McIntosh, Director of the Pediatric Service, as President of the Medical Board, expired in June. He was succeeded by Dr. Howard C. Taylor, Jr., Director of the Obstetrical and Gynecological Service. Dr. McIntosh's efficient performance of his duties was at all times a source of great assistance and we look forward to Dr. Taylor's able leadership.

All members of the professional staff have continued to give selflessly of their time, effort and resources to further promote the aims and ideals of the Medical Center.

Administration

During the year, Mr. Dale K. Tuller was appointed Assistant Vice-President and Mrs. Arlene Adsit was appointed Administrative Assistant for Public Interest.

Action was taken during 1952 by the Board of Trustees liberalizing the Hospital's Group Retirement and Group Life Insurance Plans to provide greater benefits for employees.

With the close of the year the Volunteer Department reported that the hours of volunteer service totalled 57,029, an increase of 39% over last year. The volunteer service is a two-fold service. The 522 volunteers who have contributed their time and talents during the year express their appreciation for the opportunity to work in the Hospital. All services have given full and cordial cooperation in the on-the-job training of the volunteers. The time contributed by the volunteers has been computed as equivalent to 28 full-time employees.

At the annual tea for volunteers on December 4, 111 volunteers were awarded the Presbyterian Hospital service pin for their first 100 hours of service. To all volunteers, we express our sincere appreciation.

Looking Ahead

Today the strength of the vast program being conducted by the Medical Center is being tested. On the one hand are the disquieting influences of an inflationary economy. On the other are the social forces and the political voices exerting pressures and expressing demands. Health programs and health measures are earnestly discussed. Health has become a major public concern. More and more, those responsible for this program are called upon to deal with questions of a public nature — questions on which the sound and objective advice of business and professional leaders are of great value.

It has often been stated that "change is essential for any organization that hopes to remain adapted to the needs of a changing world." As we review the record of The Presbyterian Hospital, its affiliation with Columbia

University, the consolidation of the voluntary hospitals and the clinics at the Medical Center under one corporate title; the structural developments; the continuous provision of modern facilities and equipment; the ever increasing numbers of patients treated each year; and the always vigilant awareness to the needs of the community, we might take satisfaction in our progress.

Yet, always before us are the baffling cases of patients suffering from diseases for which the cause and cure has not yet been determined; the threads of hope that through coordinated research cures for these diseases will be found; and the knowledge, which few understand, that a doctor in a teaching hospital not only gives hours of time to the patient, whether private, ward or clinic, he also teaches and conducts research. These are the constant reminders of accomplishments yet to be gained.

With the help of our loyal staff of doctors, nurses and other personnel and with the continued assistance of our many friends, we approach 1953 with eagerness and confidence.

Charles P. Cooper,
President

February 5, 1953.

In Memorium

H. RIVINGTON PYNE

At a meeting of Trustees of The Presbyterian Hospital in The City of New York, held April 28, 1952 the following minute was read and adopted by rising vote:

We record with regret the death of our Honorary Trustee, H. Rivington Pyne, who died at Far Hills, New Jersey, on March 24, 1952.

Mr. Pyne, a graduate of Princeton in the class of 1914, and a pilot in World War I, was elected a Trustee of the New York Orthopaedic Hospital on December 12, 1929. He continued as a Trustee until the consolidation of the Orthopaedic and our Hospital in 1945.

Throughout his connection with the Orthopaedic Hospital he took a keen interest in the various phases of its curriculum and activities, serving at various times on the Country Branch, Auditing and Nominating and Printing Committees. In 1938 he was elected Secretary of the Board. In spite of his conflicting duties in the New Jersey Legislature, first as Assemblyman and later as State Senator, he gave much time and personal attention to the affairs of the Hospital. As he found that his duties at Trenton prevented being in the City except on rare occasions, he resigned as Secretary in 1942. On October 1, 1945, he became an Honorary Member of the Board of Trustees of the Presbyterian Hospital.

Even though his family had been closely identified solely with the Orthopaedic for many years, he was in favor of the consolidation of our two Hospitals. He regretted that he found his other duties too pressing to attend our meetings, but he nevertheless kept posted on all that we were accomplishing with our combined facilities.

We wish to express the high regard his associates on the Board had for Mr. Pyne, and the sorrow we feel in his death. His cordial personality and his many other outstanding qualities won for him many friends, among them the Trustees of the Presbyterian Hospital, all of whom wish to extend their sympathy to Mrs. Pyne and her family.

W. E. S. Griswold, Jr.
Secretary

Charles P. Cooper,
President

In Memorium

JOHNSTON de FOREST

At a meeting of Trustees of The Presbyterian Hospital in The City of New York, held December 8, 1952 the following minute was read, and adopted by rising vote:

The Board of Trustees of The Presbyterian Hospital in the City of New York, with profound sorrow, and keenly conscious of the loss they have suffered, record the death on November 25, 1952 of their friend and fellow member, Johnston de Forest.

Born in 1873; graduated from Yale in 1896 and from the Columbia Law School in 1899, Mr. de Forest, true to the public spirited traditions of his family, entered upon a career of unselfish and devoted service to his fellow citizens. During most of his professional life he was an active and successful member of De Forest Brothers, a firm founded by his father and his uncle.

In 1913 he was elected a member of the Board of Managers of the Presbyterian Hospital. This marked the start of one of the longest and most influential terms of office in the history of the Board. He was a member of a number of committees over various periods of years: the Real Estate Committee for 29 years; the Executive Committee, for 8 years; the Nominating Committee for 35 years, to mention but a few, and on some of these he served as Chairman.

His humanitarian interests were wide — The Provident Loan Society, the Charity Organization Society, later the Community Service Society, the Russell Sage Foundation, and the Madison Square Boys' Club all benefited by his wisdom, his experience, and his unselfish and constant devotion to their work. This service for others was carried on during a life filled with professional and business responsibilities, for he was a director of business and banking corporations of great size and widely diversified interests.

In all of these activities he gave of himself, his mind, his time, his loyalty, and perhaps best of all, his friendship. A warm heart and a great soul were placed at the service of friends and worthwhile causes. These

things this Board has lost, and while recording our sorrow over our separation, we pay tribute to his ability, the warmth of his friendship, and his unselfish devotion to the work of Presbyterian Hospital.

BE IT RESOLVED, that this Minute be made a part of the records of the Hospital, and that a copy be sent to his family.

W. E. S. Griswold, Jr.,
Secretary

Charles P. Cooper,
President

REPORT
of the Treasurer

THE PRESBYTERIAN HOSPITAL

BALANCE SHEET, DECEMBER 31, 1952

ASSETS

	December 31 1952	1951
ENDOWMENT FUNDS ASSETS:		
Investments:		
Bonds and stocks (approximate market quotation value—1952, $59,811,652)	$51,709,126	$50,384,974
Mortgages receivable, etc.	801,440	859,671
Cash	133,087	345,169
Total endowment funds assets	$52,643,653	$51,589,814
PROPERTY AND EQUIPMENT	$32,329,914	$31,423,086
CURRENT FUNDS ASSETS:		
Investments—Bonds, etc. (approximate market quotation value—1952, $2,965,546)	$ 3,000,577	$ 2,745,029
Cash	83,906	362,373
Accounts receivable (less reserve—1952, $160,610; 1951, $149,438)	1,336,113	910,668
Supplies and materials	318,517	359,092
Interest accrued and dividends receivable	349,781	325,817
Prepaid insurance, etc.	10,505	16,533
Total current funds assets	$ 5,099,399	$ 4,719,512
Total	$90,072,966	$87,732,412

Notes:

(1) The Hospital's policy with respect to property accounting is (a) to make no provision for depreciation; (b) to capitalize only such property items as increase capacity or facilities; and (c) with respect to property items which do not increase capacity or facilities, to charge minor items to departmental expense and major items to appropriations from income.

E CITY OF NEW YORK

, 1952 AND 1951

FUNDS AND LIABILITIES

	December 31 1952	1951
ENDOWMENT FUNDS (Exhibits C and D)	$52,643,653	$51,589,814
CAPITAL INVESTED IN PROPERTY AND EQUIPMENT	$32,329,914	$31,423,086
CURRENT FUNDS AND LIABILITIES:		
General fund (Exhibit C)	$ 4,254,403	$ 4,396,873
Appropriation for property repairs and replacements —(Overexpended)	*821,807*	*1,147,331*
Special expendable funds (Exhibit C)	727,715	790,473
Undistributed income from endowments	32,040	
Accounts payable	350,447	218,611
Patients' credit balances	71,723	76,840
Accrued payroll and other expenses	484,878	384,046
Total current funds and liabilities	$ 5,099,399	$ 4,719,512
Total	$90,072,966	$87,732,412

(2) The benefits under the Hospital's Group Retirement Plan are provided for by a contract with the Travelers Insurance Company and a Retirement Fund Trust. The Trustees' Report is shown on page 27.

Exhibit B

The Presbyterian Hospital in the City of New York

STATEMENT OF INCOME

For the Years Ended December 31, 1952 and 1951

	Year Ended December 31	
	1952	*1951*
OPERATING INCOME:		
Care of patients	$10,156,464	$ 8,838,259
Other services	1,239,453	1,140,593
Total	$11,395,917	$ 9,978,852
Transfer from special expendable funds (Exhibit C):		
For research	331,191	292,027
For other designated purposes	299,531	237,683
Total operating income	$12,026,639	$10,508,562
OPERATING EXPENSES (see note on page 18):		
Administration	$ 148,875	$ 151,919
Assistant Secretary-Treasurer	850,019	777,732
Comptroller's Office	278,723	274,252
Convalescent Home	137,639	123,635
Food Service	2,118,068	2,010,444
Non-Professional Services	1,822,811	1,766,459
Appropriation for Property Repairs and Replacements (see Note)	795,000	550,000
Personnel and Protective Services	192,631	195,495
Professional Services:		
Nursing	3,821,330	3,421,672
Other	4,577,645	4,228,818
Public Interest	50,220	48,858
Total operating expenses	$14,792,961	$13,549,284
NET OPERATING LOSS	$ 2,766,322	$ 3,040,722
OTHER INCOME FOR GENERAL PURPOSES:		
Investment income	$ 2,149,201	$ 2,243,090
Contributions	501,228	629,774
	$ 2,650,429	$ 2,872,864
NET LOSS (charged to general fund—Exhibit C)	$ 115,893	$ 167,858

Note — 1952 includes special appropriation of $195,000 for replacement of the brine refrigeration system.

Exhibit C

The Presbyterian Hospital in the City of New York

SUMMARY OF FUND CHANGES

For the Years Ended December 31, 1952 and 1951

	Year Ended December 31 1952	1951
ENDOWMENT FUNDS		
Balance, January 1	$51,589,814	$49,851,138
Add:		
Legacies and contributions	$ 297,575	$ 1,053,733
Gain from disposal of investments	746,264	684,943
Transfer from general fund	10,000	
	$ 1,053,839	$ 1,738,676
Balance, December 31	$52,643,653	$51,589,814
GENERAL FUND		
Balance, January 1	$ 4,396,873	$ 4,602,029
Add:		
Unrestricted legacies	$ 158,933	$ 602,530
Gain from disposal of investments	113	4,835
Proceeds from sale of Orthopaedic Hospital real estate		343,650
	$ 159,046	$ 951,015
Total	$ 4,555,919	$ 5,553,044
Deduct:		
Net loss (Exhibit B)	$ 115,893	$ 167,858
Expenditures for property and equipment	175,623	988,313
Transfer to endowment fund	10,000	
	$ 301,516	$ 1,156,171
Balance, December 31	$ 4,254,403	$ 4,396,873
SPECIAL EXPENDABLE FUNDS		
Balance, January 1	$ 790,473	$ 834,932
Add:		
Legacies and contributions	$ 1,011,562	$ 721,678
Investment and other income	383,532	394,610
	$ 1,395,094	$ 1,116,288
Total	$ 2,185,567	$ 1,951,220
Deduct:		
Transfers to operating income (Exhibit B)	$ 630,722	$ 529,710
Expenditures for property and equipment	730,663	476,497
Miscellaneous	96,467	154,540
	$ 1,457,852	$ 1,160,747
Balance, December 31	$ 727,715	$ 790,473

Exhibit D

The Presbyterian Hospital in the City of New York

ENDOWMENT FUNDS, DECEMBER 31, 1952

The Presbyterian Hospital:

Anonymous	$ 625,926.00
Baker, Mrs. Frederick, Pathological Department	8,500.00
Briddon, C. K., Gold Medal	1,058.80
Brookman, Henry D.	50,000.00
Cary, Caroline Catherine	50,000.00
Coakley, Cornelius G., Trust	38,900.00
Colgate, Hannah, Memorial	60,794.38
Collins, Perry McDonough	548,999.31
Columbia University for Vanderbilt Clinic and Sloane Hospital	1,400,000.00
Cook, William W.	119,497.70
Cragin Fund	68,818.56
Davis, Isabel G.	568,985.36
Delano, Moreau	4,000.00
Dodge, The Cleveland H.	310,500.00
Dortic Memorial	99,024.11
Dows, Mrs. David	7,700.00
Dows, Margaret E.	5,360.25
Educational and Scientific Work	285,527.50
Eichner, Joseph Herman and Hannah, in Memory of	8,575.87
Eidlitz, Otto M.	415,271.50
Endowed Bed	1,655,675.09
Endowed Bed—Research	184,961.95
Faulkner, The Edward Daniels, Memorial for the Study and Treatment of Arthritis	100,000.00
Fiske Fund	104,236.20
FitzGerald, Frederick H. and Josephine F.	141,362.49
Flagler, Alice Manderlick	250,141.64
Foote, Edwin Bancroft	175,948.87
Ford, George W. and Eliza Lawson	330,911.11
General Endowment	261,884.42
Goldschmidt, Henry Philip	5,000.00
Gondran, Sophie M. and Adolph L.	100,000.00
Griffith, Griffith W. and Mary Jones, Memorial	1,282,539.33
Haller, Maria L.	2,609.29
Harkness, Edward S.	6,188,794.01
Harkness, Edward S., Memorial	14,000,000.00
Harkness, Edward S., Research	500,000.00
Harkness, Mary Stillman, Memorial Endowment	250,000.00
Harkness, The Mary S., for Convalescent Care	1,003,044.97
Hartford, The John A., Foundation	300,000.00
Hill, Marguerite S.	5,500.00
Institute of Ophthalmology, The	3,412,942.00
Jesup, Morris K and Maria DeWitt	100,000.00
Jones, David, Memorial	300,000.00
Jones, Margarette A.	166,255.33
Keller, Memorial	500.00
Kennedy, John Stewart	1,828,688.30
Kinnicutt, The G. Herman, Flower	5,000.00

ENDOWMENT FUNDS, DECEMBER 31, 1952

The Presbyterian Hospital (*Continued*)

Knapp, The Herman, Memorial Eye Hospital Endowed Bed	$ 60,375.00	
MacMillin, Isabel, Memorial	1,285,562.73	
Martin, Frederick Townsend	10,000.00	
Maxwell, Anna C., Memorial Library	5,975.65	
McCosh, Dr. Andrew J., Memorial	100,192.10	
McCready, Jeanne Campbell	106,529.11	
McGuire, Mary Madison	258,000.00	
Medical Scientific	317,225.55	
Ottman, for Cancer Research	20,000.00	
Quick, The Walter R.	14,855.44	
Room "J" Trust	5,294.00	
Sage, Dean, Memorial	28,253.26	
Sage, Dean, Scholarship	5,000.00	
Sage, Russell and Margaret Olivia, Memorial	878,187.55	
School of Nursing	176,533.06	
Sherry, The Bertha Memorial	653,400.76	
Sidman Trust	1,072.05	
Sloane Hospital	783,257.26	
Sloane Hospital Babies' Alumni	16,111.86	
Sloane Hospital Research	25,000.00	
Squier Clinic	113,635.90	
Surgical Fellowship	60,000.00	
Terry, John T., in Memory of	40,767.35	
Tod, J. Kennedy, Memorial	100,102.29	
Tolfree, The Caroline O. and James E., Memorial	157,370.21	
Valentine, Isaac E., Memorial	563,227.20	
Van Norden, Kathryn L.	2,609.29	
Vanderbilt Clinic	156,805.93	
Weinman, Moses	5,360.25	
Welles, Frances Swan	10,000.00	
Wheeler, The Dr. John M., Memorial	73,791.09	
Williams, William	342,658.48	
		$43,710,587.71

ENDOWMENT FUNDS, DECEMBER 31, 1952

The Babies Hospital:		
Cleft Palate Cases	$ 1,000.00	
Cribside Social Service Committee	12,828.57	
Educational Therapy	1,000.00	
Eichner, Joseph Herman and Hannah, in Memory of	8,575.87	
Endowed Bed	5,000.00	
Harkness, Edward S., Educational and Scientific	600,000.00	
Harkness, Edward S.	1,199,775.00	
Harkness, Mary Stillman, Memorial Endowment	250,000.00	
Kimball, Reuel B.	57,737.58	
Rathbone, R. Bleecker	15,000.00	
Rumson Fund	20,469.78	
Videre, Leontine, Foundation	9,976.47	
		2,181,363.27
Neurological Institute:		
Blair Memorial	$ 3,126.64	
Ogilvie, Clinton, Memorial	9,970.00	
		13,096.64
New York Orthopaedic Dispensary and Hospital:		
Bridgman, Statira	$ 2,500.00	
Endowed Bed	598,842.80	
Farrell, Dr. Benjamin P., in Memory of	5,927.50	
General Endowment	833,259.21	
Hibbs, Russell A., Memorial Library	36,067.97	
Hurst, The Thomas D. and Kate	5,000.00	
Kane, Annie C., Fellowship	1,000,000.00	
Rathbone, R. Bleecker	15,000.00	
Tower, Mary T., in Memory of	30,568.85	
Watson, Emily A.	2,502,256.56	
White, Emily Vanderbilt	20,000.00	
Willard, Mary Livingston	5,000.00	
		5,054,422.89
Gain from Disposal of Endowment Fund Investments since November 1, 1946		1,684,182.70
Total Endowment Funds		$52,643,653.21

ACCOUNTANTS' CERTIFICATE

The Presbyterian Hospital
in the City of New York:

We have examined the balance sheet and supporting schedule of endowment funds of The Presbyterian Hospital in the City of New York as of December 31, 1952 and the related statement of income and summary of fund changes for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying balance sheet and schedule of endowment funds and the statement of income and summary of fund changes, with the footnotes thereon, present fairly the financial position of the Hospital at December 31, 1952 and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year, except that certain income has been deferred to the subsequent year through the origination and operation of a reserve for undistributed income on investments of pooled funds, which change we approve.

Haskins & Sells
Certified Public Accountants

New York
January 30, 1953.

REPORT OF THE AUDITING COMMITTEE

To the Board of Trustees of The Presbyterian Hospital
in the City of New York:

Pursuant to Article VII of the By-Laws of The Presbyterian Hospital in the City of New York, the undersigned Auditing Committee appointed by your Board has chosen, with your approval, the firm of Haskins & Sells, as independent certified public accountants, to make an examination of the books and accounts of The Presbyterian Hospital in the City of New York for the fiscal year 1952.

We submit herewith, after due consideration by this Committee, a certificate of Messrs. Haskins & Sells dated January 30, 1953 relating to the Corporation's balance sheet and schedule of endowment funds as of December 31, 1952 and related statement of income and summary of fund changes for the year then ended, as reflecting the results of a satisfactory examination of the said books, accounts, cash and securities. Your Committee recommends that the Certificate and financial statements be accepted and approved.

William Hale Harkness, *Chairman*
John W. Hornor
Thatcher M. Brown, Jr.
Auditing Committee

New York
January 30, 1953.

Exhibit E

TRUSTEE'S REPORT OF RETIREMENT FUND TRUST ESTABLISHED BY THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

For Period January 1, 1952 — December 31, 1952

Assets in Fund—January 1, 1952	$621,770
Contributions to Fund	150,000
Net Income from investments including profit on investments disposed of	23,792
	$795,562
Disbursements for retirement benefits	43,849
Assets in Fund—December 31, 1952	$751,713

	*Book Value**
Comprised of:	
U. S. Government Obligations	$ 48,944
Industrial, Railroad and Public Utility Bonds	453,850
Preferred Stocks	60,479
Common Stocks	178,005
Cash	10,435
	$751,713

* Book value of bonds are adjusted to write off premiums or write up discounts by their maturity. The cash and approximate market value of the securities held as of December 31, 1952 totalled $779,201.

Guaranty Trust Company of New York,
Trustee

By William F. Lackman
Second Vice President

New York
January 13, 1953.

REPORTS
of
Services

Anesthesia

E. M. Papper, M.D., *Director*

On January 1, 1952 the Service of Anesthesiology was established in The Presbyterian Hospital. The separation from the Surgical Service administratively was one of mixed feelings. It was the fulfillment of an important goal which was the recognition of the specialty of anesthesiology as one worthy of independent service stature in the Hospital. However, it also bore with it the responsibility for its own future development. Happily, the guidance of the Surgical Service has continued to be available for generous counsel and assistance. Particular gratitude is expressed to Dr. George H. Humphreys, II for his patience, wisdom and vision in developing Anesthesiology to the professional status meriting its establishment as a service and for his continuous support. Appreciation is also freely given to the Trustees of the Hospital and the Administration for their complete cooperation and foresight in this development.

It is recognized that the growth of a new service in the Hospital depends in large part on the broadening and strengthening of the Attending Staff. This goal was pursued by the appointments of Drs. Beatrice T. Gilbert and Herbert Rackow upon the completion of their residency in The Presbyterian Hospital, and the transfer of Dr. Robert C. Peterson and Dr. Bernard R. Fink from other institutions to this staff. In this manner experienced anesthesiologists joined the department and the pattern of orientation in anesthesiology was broadened by the addition of points of view different from our own.

It is with pride as well as deep regret that the resignation of Dr. Thomas F. McDermott from the Attending Staff is reported. Dr. McDermott resigned to assume the position of Director of the Department of Anesthesiology at the Georgetown Hospital, and Professor of Anesthesiology at the Georgetown University School of Medicine.

Dr. Virginia Apgar was elected Vice Chairman of the Section of Anesthesiology of the American Medical Association. She also received an Alumnae citation for distinguished work in Anesthesiology from her

Alma Mater, Mt. Holyoke College. Dr. Apgar has continued to serve as President of the Board of Governors of the American College of Anesthesiologists. Her clinical and investigative activities in the neglected field of obstetrical anesthesia, have won her national recognition as an authority in this field. This development is a matter of great satisfaction to this department and accentuates the growing interest in the anesthetic care of obstetrical patients. Dr. Apgar also continues to serve as a member of the Sub-Committee on Anesthesia of the National Research Council. This group is engaged in an important five year study of death associated with the administration of anesthesia. Dr. Emanuel M. Papper continues to serve in several positions of responsibility in the American Society of Anesthesiologists, the New York State Society of Anesthesiologists, a committee responsible to the American Board of Anesthesiology, and as consultant to the Armed Forces in this area. Dr. William S. Howland was elected President of the Second District of the New York State Society of Anesthesiologists. Drs. Duncan A. Holaday and Herman Schwartz were certified as Diplomats of the American Board of Anesthesiology.

Twenty-three papers and articles were published by members of the staff in 1952. Sixty-two scientific presentations at various meetings were given by members of the Attending Staff. These include presentations at the American Medical Association, American Society of Anesthesiologists, the Post Graduate Assembly, the Federated Societies of Experimental Biology and Medicine and other organizations devoted to scientific and clinical interests.

During the year a large number of distinguished visitors from this country and abroad were guests of the Anesthesiology Service. We were particularly honored by the visit and special lecture given by Dr. Ivan Magill, Consultant in Anaesthetics to the Ministry of Health of Great Britain.

The research program which was in its infancy prior to this year has continued to grow in magnitude of the numbers of projects undertaken and the significance of the information which has been forthcoming. Dr. Duncan A. Holaday completed this year the development of an explosion proof pH meter for making repeated determinations of pH on arterial blood in the operating room. This apparatus was found to have satisfactory stability and accuracy. A description of the apparatus is in preparation for publication. Sufficient interest has developed in this re-

search tool to interest two manufacturers of scientific equipment who plan to make it available to other research groups. Drs. Holaday and S. Louis Carpenter have continued their studies of acid base balance during and after anesthesia and operation. They have concluded from these studies several important facts. There are rapid changes of acid base balance during anesthesia and a method which permits frequent sampling of arterial blood is necessary to detect these changes. Ether is the only anesthetic agent they have studied which has been found to produce metabolic acidosis consistently. Dr. Holaday has pointed out for the first time that a respiratory acidosis during anesthesia is accompanied by the concurrent development of a metabolic acidosis. The mechanism of these findings are as yet unknown. Current studies in this project are concerned with measurements of serum electrolytes. With the help of Dr. Samuel R. Powers of the Surgical Service the electrolyte measurements together with estimations of blood volume and the measurement of sodium space will form the basis for an attempt to determine whether redistribution of electrolytes during anesthesia is a factor contributing to the observed changes in acid base balance. Another possibility, namely the accumulation of fixed organic acids, especially lactic acid, as a factor in this phenomenon is being studied by Dr. Herbert Rackow in collaboration with Dr. Holaday.

The study of the electrical activity of the small intestine in which Dr. Holaday has engaged, in collaboration with Drs. Herbert Volk of the Surgical Service and Julian Mandell of the Radiological Service, has continued. The first portion of this work has been summarized and several conclusions drawn. It has been shown that the small intestine exhibits two types of electrical activity. Dr. Holaday and his collaborators found that slow rhythmical electrical changes originating at the cellular level correlate with a rhythmical rise and fall of irritability of the smooth muscle of the small intestine. Electrical activity is unaltered by drugs affecting the autonomic nervous system or by local and general anesthetic agents. It is depressed and slowed by anoxia. It was concluded that the electrical signals recorded are the manifestation of that process which determines that the bowel shall contract rhythmically. At the present time, work is in progress with the aid of microelectrodes to determine from which cells in the bowel wall the electrical activity originates and what biochemical processes are responsible for its generation.

Dr. Holaday in collaboration with Drs. George Koelle and Kazuya Kamijo, formerly of the Department of Pharmacology of the College of

Physicians and Surgeons, studied the effects of DFP (Di-isopropyl fluorophosphate) on conduction and transmission in the autonomic nervous system.

Drs. Holaday and Carpenter have begun quantitative studies of spontaneous and assisted respiration during anesthesia. Information is being collected on the relationship between the rate of gas flow during inspiration and the pressures required to produce these flows. This study is designed to determine the best method of assisting respiration during open chest procedures.

Dr. Holaday is also engaged in the improvement of micrometric methods for the analysis of blood gases in the presence of anesthetic agents. At the present time a method has been devised for the determination of carbon dioxide in plasma in the presence of any of the volatile anesthetic agents which is accurate enough for the purposes of the several studies described above.

Dr. Holaday in collaboration with Drs. Shih-hsun Ngai and S. C. Wang, the latter of the Department of Physiology, has engaged in an analysis of the activity of individual cells and small groups of cells in the medulla of the cat during normal and abnormal patterns of respiration. These experiments are entirely in the preliminary stage and thus far a suitable recording system with appropriate microelectrodes has been set up.

Dr. Virginia Apgar has continued her clinical and experimental studies designed to improve the understanding of respiratory problems in the newborn. With Drs. Richard Day and Alice Goodfellow of the Pediatrics Service, she has carried out studies on excised lungs of animals and infant autopsy material. It appears from these studies that it is necessary to impose a rather high positive pressure for an extremely short time in order to expand premature or atelectatic lungs. This is not in agreement with previously accepted practices and work is in progress to determine whether this type of positive pressure will be suitable for clinical application. Dr. Apgar has continued her studies with Dr. Joseph Kreiselman on the Bloxsom Air-lok. The current clinical enthusiasm for this apparatus in the resuscitation of the newborn appears to be totally unwarranted from these experimental studies, as well as the clinical experience in the Sloane Hospital for Women. Dr. Apgar has continued her clinical studies

on the evaluation of the newborn infants by an objective method. This consists in assigning arbitrary numerical values to a variety of clinical phenomena in the newborn. Thus far, in a large number of infants, the correlation of these numerical evaluations with infant mortality and morbidity appears to be good. A great deal of interest in this method of evaluation of the newborn has been evoked in other parts of the country.

Dr. Shih-hsun Ngai in collaboration with Dr. S. C. Wang of the Department of Physiology, has continued his studies on the respiratory center in the cat. They were able to localize the pneumotaxic center precisely in the dorsolateral reticular formation of the rostral pons. Dr. Ngai continued his studies on the neural control of vascular resistance in the hind limb of dogs in collaboration with Dr. Wang and Dr. M. Jack Frumin. They concluded that the ventral roots' sympathetic adrenergic constrictor fibers are probably the sole pathway in the neural regulation of peripheral vascular resistance. The dorsal root system does not play any role in such physiological regulations.

Dr. Daniel Tausig is engaged in the clinical revaluation of a new anesthetic agent ethyl vinyl ether. He has also participated with Dr. Thomas Bridges of the Neurosurgical Service in a clinical and experimental study of induced hypotension with hexamethonium bromide during operations upon the central nervous system. Dr. Tausig is participating in the Temporo-mandibular Joint Clinic in collaboration with Dr. Laszlo Schwartz. This clinic concerns itself with the treatment of pain and other disabilities in the temporo-mandibular joint.

Dr. Frumin in collaboration with Dr. Herman Schwartz and Dr. John Burns of the Goldwater Memorial Hospital completed the first section of the study on the mode of production of spinal and peridural block in man. Drs. Frumin and Schwartz, together with Dr. Albert Plentl of the Obstetrical and Gynecological Service and Dr. David V. Habif of the Surgical Service, and Dr. Carter Ballinger have undertaken a reinvestigation of the post-cyclopropane hypotension phenomenon. Dr. Frumin has undertaken seven small clinical studies involving the use of extremely small caliber spinal needles, the use of ephedrine and its antagonism of the respiratory depression of decamethonium compounds, and finally with Dr. Rackow has developed a nasopharyngeal technique for administering inhalation anesthesia through an absorption system in clinical situations where neither a face mask nor endotracheal intubation is desirable.

Dr. Edgar C. Hanks has continued his clinical collection and correlation of data on the patients who suffered cardiac arrest in the Medical Center. He is currently studying the cases of cardiac arrest who have had subsequent administrations of anesthesia and operation. Dr. Hanks is also interested in following patients who have recovered without incident to determine something about their subsequent course.

Dr. Frederick W. Hehre has continued his studies on PVP (Polyvinyl pyrrolidone). This work is part of a project directed by Dr. John Scudder of the Department of Surgery. Dr. Hehre has participated in the several scientific exhibits on plasma expanders that the group has shown at several meetings. Dr. Hehre has also continued his studies on blood volume measurements during anesthesia and operation.

Dr. Beatrice Selvin has completed a study on the influence of myanesin on postoperative pain in spinal fusion operations.

Dr. Schwartz has collected the experience available in the Presbyterian Hospital and the Peter Bent Brigham Hospital in Boston on the responses of patients with Addison's disease to anesthesia and operation. It was determined that the key to success in managing these patients was adequate hormonal replacement therapy and medical management. There was no one anesthetic agent that was more injurious or more beneficial than another. Dr. Schwartz has also, together with Dr. Frumin, collected the department's clinical experience with continuous segmental peridural anesthesia, and has systematized this material for publication.

Dr. Bernard Raymond Fink has engaged in several projects of interest, as yet preliminary but interesting data are being collected on the mechanism of the production of oxygen unsaturation under specific conditions.

Dr. Papper has continued his studies on renal function during anesthesia and operation in collaboration with Dr. Stanley Bradley of the Medical Service and Dr. Habif of the Surgical Service. Current studies are concerned with the influence of spinal anesthesia on the renal mechanisms which were studied previously in connection with general narcosis. There are insufficient data at the present time for generalizations on these findings. In the study of cardiovascular function during anesthesia and operation Drs. Papper and Holaday have continued their participation with Drs.

Arthur Blakemore, Ralph Deterling, Hugh Fitzpatrick, and Samuel R. Powers of the Surgical Service. From the standpoint of anesthesia, data are being collected and systematized for publication on the influence of intravascular injections of procaine upon circulatory dynamics and electrical activity of the heart. The influence of positive pressure respiration on circulatory dynamics has also been measured. In the former study the evidence appears clear that procaine not only does not protect the heart against disorders of rate and rhythm but may actually accentuate them and produce an associated hypotension. This finding has been utilized clinically in that procaine administration in operations on the heart and great vessel has in large part been abandoned.

Dr. Papper and Dr. Robert C. Peterson have continued their collaborative studies with Dr. Bernard B. Brodie of the National Heart Institute, Dr. Philip A. Lief of the Mt. Sinai Hospital and Dr. John Burns of the Goldwater Memorial Hospital on the clinical pharmacology of synthetic narcotic and intravenous barbiturate anesthetic agents.

The study on the intravenous barbiturate acid derivatives for anesthesia continues. It is intended to derive from these studies fundamental information concerning the pharmacology of these drugs and to provide direction for the development of better drugs for clinical use. There is a need for a potent intravenous anesthetic agent which may be used in operations of long duration without producing postoperative somnolence. We are attempting, therefore, to develop an agent, highly unstable in vivo, or localized innocuously in some portion of the body tissues. The studies on thiopental sodium have previously been reported. These were extended to include Kemithal, Surital, Evipal and a new barbiturate Rapidal. All of these appear to behave in a manner similar to that of Thiopental. At the present time studies are in progress on N-methyl derivatives of Thiopental. This drug appears promising in a preliminary aspect.

Drs. William S. Howland and Herbert Rackow have developed suitable clinical usages for a new muscular relaxant Succinyl Choline and have adapted it to the special problems of endotracheal intubation with nonexplosive agents.

The investigative work reported was generously supported by Mr. Charles B. Wrightsman, Abbott Laboratories, the Ohio Chemical and Surgical Equipment Company, and grants to the University from the

National Institutes of Health and The Squibb Institute for Medical Research.

In the year 1952, approximately 21,000 anesthesias were administered and 678 diagnostic therapeutic nerve blocks were performed. The death rate from anesthesia during this period has been approximately one in 3,000 cases. This compares favorably with the incidence in ten leading university hospitals of one in 1,630 cases. However, the unsuspected magnitude of the death rate from anesthesia the country over is a public health problem of no small importance. The death rate study sponsored by the National Research Council, which was cited above, comprises over 600,000 cases. If one assumes that there are approximately 10,000,000 operations annually in the United States it suggests that the death rate from anesthesia is 8 to 10 times that of poliomyelitis. The support of research in poliomyelitis has far exceeded the interest in the problem of anesthesia. It seems reasonable to expect that once the importance of the public health aspect of anesthesia is understood that greater support to research in this field will be forthcoming. The problem of anesthetic mortality is even more accentuated with respect to small children and Negroes. The death rate in these groups is considerably in excess of their proportionate numbers.

Medicine

Robert F. Loeb, M.D., *Director*

The day when hospitals were considered solely as asylums for custodial care or refuges for the indigent suffering from acute disease has long since passed. Likewise the concept that medical care begins and ends at the hospital door may be looked upon as a relic of the past. The accepted function of the hospital in society, and partcularly that of a University Hospital, has evolved with the advance of medicine. With broadening concepts of preventive medicine, with an increased awareness of the influence of environment upon the health of man, with knowledge gained through the long term study of health in addition to the episodic study of disease, there have been perforce introduced into the effectuation of "total care" of the individual, ancillary services and integrating agencies as well as complex technical advances essential for modern treatment undreamed of at the turn of the century.

In this evolution the Presbyterian Hospital has been a consistent leader. In 1904, shortly after Richard Cabot had led his successful crusade for the introduction of Social Service at the Massachusetts General Hospital a similar service was introduced at the "old hospital" on 70th Street. The importance of Social Service has not diminished with the course of time. On the contrary, it has actually increased because of a progressively clearer understanding of the practical significance of socio-economic factors in the maintenance of health of the patient. Social Service constitutes an essential link between care of the patient in the hospital and his restoration to an economic role in society.

In 1915 and 1916 there were introduced, largely due to the vision and energy of Drs. George Brewer, Adrian Lambert, Albert R. Lamb and Hugh Auchincloss, a free Follow-up Clinic for patients who had been hospitalized in the wards, and a Unit History system. It was recognized that through these devices an enormous amount might be learned about the life history and management of disease, including prevention, control and care, and about its overall consequences in the individual. The measures taken here years ago constituted a pioneering step in the integration of the disciplines in-

volved in "total care" of the patient. They also contributed to an invaluable advance in medical education for they gave the student and young physician an opportunity to unify aspects of medicine which tended to be compartmentalized in the various departments of a medical school.

Later, the activities of the Presbyterian Hospital were expanded in a number of significant directions. A Department of Nutrition was developed. Dietary management based on sound physiological principles has an even more important part to play in the prevention of disease in children and adults than it does in the care of established disease. For example, the requirements of diet for normal growth and development of children and the control of body weight in adults are considerations of incalculable significance in the maintenance of a healthy community. In more recent years a Convalescent Home has been built and an affiliation established between the Institute for Crippled and Disabled and Columbia University based on recognition of the essentiality of programs of rehabilitation. There has also been established, the Group Clinic, described at some length in last year's report. It is gratifying to realize that the forward-looking and steadily evolving program initiated at the Presbyterian Hospital almost four decades ago for the consolidation of various aspects of medical care, is currently being discussed by various hospital, educational and professional groups as a new concept of signal importance.

It is our responsibility at the Presbyterian Hospital to continue this splendid leadership. It is a function of this leadership to arrive at wise decisions concerning the best means of applying the rapid advance of medical science and medical thought to the art of healing in a University Hospital, always distinguishing clearly between those components of patient care which are *primarily* the duty of a teaching institution and those which are logically the responsibility of the community and the family physician. With somewhat utopian concepts concerning the relation of medical care to the socio-economic maladjustments of mankind* on the one hand and reactionary forces decrying any direct responsibility of the teaching hospital to the community on the other, sound leadership is essential in order to resist the emotional appeals made by both extremes. Currently there are being recommended and introduced home care programs, health examination plans and diagnostic services, all of which would of necessity demand large expenditures of professional manpower and of money. It is still not

*The World Health Organization had defined health as "a state of complete physical, mental and social well-being, not merely the absence of disease of infirmity".

clear how far an endowed voluntary University Hospital should go in assuming these activities with their unavoidable deflection of effort from current programs in patient care, teaching and research. Whether or not these plans should be in part or wholly supported by governmental funds poses another difficult question. How much these programs, if widely extended, would ultimately interfere with the freedom of action of physicians and members of the community is also not apparent at this time. It is, however, certain that these problems and many others must be given thoughtful consideration for they will demand wise decisions. Because the majority of problems of health involve internists primarily, in their role of the family physician, the Medical Service is devoting its energy and experience to aid in their solution.

The continuing uncertainty surrounding the call to military service of members of the Resident Staff during the first year of their training makes it extremely difficult to keep stabilized their various assignments of clinical responsibility. It is probable that the call of a number of members of the staff next year will necessitate further adverse modification of the Resident program of the Medical Service. To guard against this and to assure the continuation of a high standard of medical care, some protection has been provided by the appointment of one or two additional Residents as a temporary measure for the coming year.

It is a pleasure to report that the sound proofing of the corridors of the Medical Service this year has proved a great success. The additional factor of quiet has been appreciated equally by patients, nurses and the professional staff. The addition of space in the seventh floor stem will remedy the serious overcrowding of the full-time staff offices on the eighth floor.

The establishment by Bruce Barton of the Esther Randall Barton Memorial bed for the study of malignant disease will greatly facilitate the efforts of members of the staff engaged in research in cancer and related diseases.

During the past year Dr. Norton S. Brown resigned as Assistant Attending Physician. Drs. John A. Atchley, Charles H. Duncan, Marjorie Lewisohn, and Emily Nichols Loeb resigned as Assistant Physicians. Dr. Loeb retains her position in the Medical School. Drs. Ralph H. Boots and Bertram J. Sanger were promoted from the position of Assistant Attending Physician

to Associate Attending Physician. Drs. Alfred Gellhorn, Joseph W. Jailer, Irving M. London, Gilbert H. Mudge, John V. Taggart and Dr. John R. West became Assistant Attending Physicians. Dr. David Seegal was appointed Associate Attending Physician.

There have been increasing numbers of visitors to the Medical Service, not only from the United States but from many foreign lands. A large number, from all parts of the world, remain for some weeks or months in the capacity of Visiting Scholars which affords them the privilege of observing the methods of medical care, teaching and research on the wards, in the clinics and in the laboratories of the Medical School but without clinical or laboratory responsibility. As in the past, there have also been Clinical Fellows who have come to the Center for advanced training, primarily in research, to a lesser extent in clinical medicine. Only those have been accepted on the Medical Service who have had an exceptionally good training in outstanding centers of learning. These physicians have received their support from the Medical Research Council of Great Britain, the Centre Nationale de Recherche Scientifique in Paris, the American Cancer Society, the New York Heart Association, the U. S. Public Health Service, the John and Mary Markle Foundation, the Life Insurance Medical Research Fund, the Fulbright Board, the Canadian Arthritis and Rheumatism Foundation, the Eli Lilly Foundation and others. It would seem most unfortunate should it not be possible in the future to accept as Clinical Fellows on the Medical Service physicians of the high caliber represented by those who are currently here and those who have been here in recent years.

During the past year a number of unusual distinctions have come to members of the Medical Service. Dr. Ralph Boots served as a Governor of the Arthritis and Rheumatism Foundation. Dr. Charles A. Ragan was named President-elect of the American Rheumatism Association and President of the New York Rheumatism Association; he also was the Editor of the Macy Conference on Diseases of the Connective Tissue. Dr. George A. Perera lectured at the Inter-American Cardiology Congress at Buenos Aires; he joined the Editorial Board of Circulation and was made Secretary of the Section on Medicine of the New York Academy of Medicine. Dr. Karl Meyer gave the Claude Bernard Lecture at the University of Montreal and lectured before the Faraday Society of the University of Cambridge. Drs. Meyer, Franklin M. Hanger and Irving London presented papers at the International Biochemical Congress in Paris. Dr. Michael Heidelberger lectured at the University of Birmingham in England. Dr. Henry Aranow gave lectures

at the London Postgraduate Medical School and the Middlesex Hospital. Dr. John V. Taggart was awarded the Gibbs Memorial Prize of the New York Academy of Medicine for his studies on the physiology of the kidney. Dr. Alvin L. Barach lectured in Rio de Janeiro where a hospital has been named in his honor for his contributions to the treatment of diseases of the chest. Dr. J. Burns Amberson became the recipient of the Trudeau Award and also served as Visiting Professor at the Brompton Chest Hospital in London. Dr. Robert L. Levy was a guest of the European Congress of Cardiology. Dr. Stanley E. Bradley became Editor-in-Chief of the Journal of Clinical Investigation and Dr. Irving M. London was appointed Associate Editor. Dr. Alfred Gellhorn joined the Editorial Board of Cancer Research and was appointed Director of the Institute of Cancer Research in the Medical School. Dr. Yale Kneeland, among other lectures, delivered the opening address of the Medical School. Dr. John V. Taggart addressed the symposium on Phosphorus Metabolism of Johns Hopkins University and Dr. Gilbert H. Mudge addressed a symposium at the University of Minnesota on Potassium Metabolism. Dr. Michael Heidelberger received the degree of Doctor Honoris Causa from the University of Strasbourg, France. He was also made President of the Harvey Society. Dr. Robert F. Loeb was awarded the degree of Doctor Honoris Causa by the University of Paris at the Sorbonne. He was also reappointed to the National Science Board by the President.

It is a deep satisfaction to acknowledge the generous and continuing support of Mrs. Edwin Weisl and Mr. Daniel Arnstein and their friends. The Daniel G. Arnstein Research Fund makes it possible to contribute significantly to the salaries of a number of members of the staff who are devoting their full time to research, teaching and the care of ward patients. Other gifts in the past year have greatly facilitated the research program.

The research activities of members of the Medical Service in the laboratories of the Medical School and wards of the Hospital, supported by grants made both to the Hospital and the College of Physicians and Surgeons, have covered a broad range of interests and proved highly rewarding. In the group supported by the Edward Daniels Faulkner Arthritis Clinic as well as by grants from the U. S. Public Health Service, the Masonic Foundation, the Helen Hay Whitney Fund, Dr. Karl Meyer and Dr. Bernard I. Weissman have continued studies on the mucopolysaccharides of the ground substances of connective tissue. They have isolated a series of oligosaccharides, starting with the completely character-

ized N-acetyl disaccharide. The influence of the enzymatic breakdown products of hyaluronic acid on wound healing is being studied by Dr. Meyer with Drs. Ragan and Felix Demartini. They are also determining whether the hyaluronidases of certain bacteria may produce certain changes in mucopolysaccharides in man as they do in the test tube.

Drs. Ragan, Demartini and Joseph Jailer, with Dr. Ralph A. Jessar, a Visiting Fellow, have not confirmed reports of others that salicylates given to human subjects cause significant increases in adrenal cortical activity. Dr. Ragan and his associates have continued their long term study of patients with rheumatoid arthritis treated with cortisone. They have demonstrated that the dosage required for complete relief of arthritic symptoms results in many instances in more serious disorders than does the disease itself. They have also continued studies to clarify the mechanism of the anti-inflammatory effects of cortisone and ACTH. Dr. Ronald W. Lamont-Havers, a Clinical Fellow, working with Dr. Ragan has continued studies on the mechanisms involved in the sheep cell agglutination test for rheumatoid arthritis developed by Drs. Ragan and Harry M. Rose. Drs. Edward E. Fischel and Charles W. Frank have continued their part of the cooperative study conducted under the U. S. Public Health Service for the comparison of the effectiveness of salicylates, ACTH and cortisone in the management of acute rheumatic fever. They have also continued studies on the prophylaxis of recurrent rheumatic fever with sulfadiazine and penicillin. Dr. Fischel with Drs. Elvin A. Kabat and John Vaughan, of the Department of Microbiology in the Medical School, has extended his studies on the mechanism by which cortisone and ACTH inhibit the formation of antibodies.

Drs. John V. Taggart and David Schachter of the Enzyme Laboratory, supported by the Rockefeller Foundation, have continued studies on the metabolic aspects of active transport mechanisms in the kidney. At the present time the major effort is directed toward the isolation from kidney of certain Coenzyme A-dependent systems which may represent the definitive cellular elements in the tubular excretion of p-aminohippurate, diodrast and penicillin. During the summer, in collaboration with Dr. Roy P. Forster of Dartmouth and Dr. S. A. Kaplan of the Cincinnati Children's Hospital Research Foundation, studies on the tubular excretion of creatinine and p-aminohippurate in the dogfish were performed at the Mt. Desert Island Biological Laboratory. Dr. Gilbert H. Mudge, supported by Dr. Taggart's grant from the Rockefeller Foundation, has continued his

studies on the mechanisms of electrolyte transport across cell membranes. During the past year he has been exceedingly fortunate in being associated with Dr. S. W. Stanbury, Clinical Fellow from the University of Manchester, England. Previous studies had shown that the transport of strong cations was dependent on oxidative phosphorylation; isotope studies had shown that the exchangeability of a fraction of tissue potassium was metabolically determined. These reactions have been analyzed more precisely in cell-free systems of tissue homogenates which give promise of permitting a better description of the biochemistry of transport mechanisms. Already it has been possible to correlate certain phases of potassium exchange with the metabolism of phosphorylated intermediates. These studies on mitochondria have also demonstrated a previously undescribed polyphasic action of dinitrophenol on phosphate metabolism.

During the past year, Dr. Irving M. London has continued studies in porphyrin, cholesterol, and protein metabolism. The metabolism of hemoglobin and bile pigment in polycythemia vera has been studied and has revealed a normal erythrocyte life span of about 120 days. Investigation of the enzymatic mechanisms involved in the synthesis of heme is being pursued with the aid of non-intact erythrocyte systems in vitro. This work, supported by the Eli Lilly Foundation and the Office of Naval Research, in conjunction with Dr. Elhanan Dimant and Dr. Nicholas B. Myant, Visiting Fellows, is concerned with the effects of agents such as folic acid, vitamin B_{12}, various cations, and lead on the synthesis of heme. The metabolism of cholesterol and phospholipids in a patient with xanthomatosis and hypercholesterolemia has been investigated in conjunction with Mr. Haiyim Schwarz, a fourth year student. The results of this study lend further support to the view that some patients with hypercholesterolemia have a relatively diminished capacity for the disposal of serum cholesterol. In conjunction with Dr. Helen M. Ranney, studies on the capacity of various tissues to form antibody in vitro are being continued. These studies have demonstrated antibody formation in spleen, lung, bone marrow and liver, and further investigation of the mechanism and sites of antibody formation is in progress.

Dr. Richard J. Cross, Walter W. Palmer Fellow in the Medical School, has been studying factors determining ketone acid formation—a problem of great importance in relation to diabetes mellitus.

Dr. Stanley E. Bradley with his group including Drs. James F. Nickel, Willoughby Lathem and Henry O. Heinemann, who were Clinical Fellows,

Dr. Peter C. Reynell of Oxford University, Dr. Paul A. Marks and Dr. Edgar Leifer, has carried on an active program of research on kidney and liver function as well as on diseases of these organs. These include changes in kidney function in relation to deprivation of sodium chloride, changes in renal blood flow and sodium excretion in response to norepinephrine and epinephrine. Dr. Bradley and his associates have also demonstrated with radioactive isotopes far wider variation in the distribution of nephron function than has been assumed in the past. They have also developed a method for measuring splanchnic blood flow which occurs as a result of acute blood loss. These studies have been supported by grants from the Department of Defense, the American Heart Association and the New York Heart Association.

Dr. Joseph W. Jailer with Dr. Jean Louchart, Clinical Fellow from Paris, and Dr. Jay J. Gold, Visiting Fellow, with support from the American Cancer Society and the U. S. Public Health Service, has continued studies on adrenal virilism due to hyperplasia. At the present time 18 patients with adrenal virilism are under treatment and in all the progress of the disease has been either halted or retarded by the administration of cortisone and all have shown a decrease in the excreting of 17-ketosteroids. Three female pseudohermaphrodites between the ages of 14 and 17 have had normal menstruation restored while on this therapy. The administration of cortisone to patients with a similar clinical syndrome but due to an adrenal tumor, however, has no effect on the urinary 17-ketosteroids. Thus, this can very well be used as a diagnostic test for the presence of an adrenal tumor. Investigations are under way to determine the metabolic defect in these adrenal glands which cause the secretion of excessive amounts of androgens and produce the virilizing syndrome. Evidence has been obtained which indicates that one of the normal precursors of Compound F may be diverted from the complete synthesis of Compound F and secreted unaltered by the adrenal to produce virilism. These studies have been carried out in the laboratories of the Department of Obstetrics and Gynecology in the Medical School.

Dr. Abbie I. Knowlton with Dr. Emily N. Loeb in conjunction with Dr. Herbert C. Stoerk of the Merck Institute for Therapeutic Research, and with support from the Albert and Mary Lasker Foundation, are extending studies of adrenal steroids in the adrenalectomized rat. The influence of these steroids singly and in varying combination has been observed

upon growth, blood pressure, serum electrolytes and cardiac and renal size. It is hoped that these observations may be useful in developing a simple assay for desoxycorticosterone-like substances.

Dr. George A. Perera has continued studies dealing primarily with hypertensive vascular disease, his research activities having been made possible through the generosity of the Albert and Mary Lasker Foundation, the Albert H. and Jessie D. Wiggin Foundation and the National Heart Institute of the U. S. Public Health Service. During the past year he has demonstrated that unilateral renal disease gives rise to a characteristic accelerated hypertensive pattern which may serve as a diagnostic aid and implies differences in mechanism from the usual picture of essential hypertension. He has extended his observations on the natural history of hypertensive vascular disease and conducted studies to evaluate hexamethonium compounds, hydrazinophthalazine and pyrogens in the management of this condition. With Dr. Kermit L. Pines, studies on the metabolic effects of thiocyanates have been concluded. With Dr. Joseph W. Jailer, the metabolic action of corticosterone has been evaluated; in addition, Dr. Perera demonstrated, together with Dr. Stuart W. Cosgriff and Dr. Kenneth B. Turner, that the alleged effects of heparin on angina pectoris are without foundation. Preliminary studies with Drs. Robert C. Darling, of the Department of Physical Medicine and Rehabilitation, and Paul A. de Sant'-Agnese, of the Department of Pediatrics, have discovered a defect in the excretion of electrolytes through the skin of patients with fibrocystic disease of the pancreas.

Dr. Sidney C. Werner has continued his studies on the thyroid gland, making observations on triodothyronine, thyroxin and thyroid stimulating hormone. He has also undertaken the editing of a new book on the thyroid gland. In view of the serious demineralization of bones which takes place in patients treated with cortisone or ACTH over long periods of time, Dr. Calvin H. Plimpton has studied the effect of cortisone on bone matrix and bone ash in rachitic rats. He has also continued his studies on the decalcification of bone in response to chronic acidosis. Dr. Marcel Goldenberg, with support from the U. S. Public Health Service, has extended his studies on the diagnosis of pheochromocytoma with the chemical methods of chromatography and fluorometry on extracts of blood and urine. He has also started studies on the urinary excretion of noradrenaline and noradrenaline sensitivity in hypertensive patients before and after sympathectomy.

Dr. Joseph C. Turner, with support from the Holmes Foundation and the U. S. Public Health Service, has continued to study nutrition in Daphnia, the water-flea. It has been possible to render the animals "germ-free" by a combination of antibiotics. In the course of these experiments it appeared that Daphnia exhibit much the same tolerance to chemotherapeutic agents as does man—a point that may be of use in testing new compounds for toxicity. The observation was made that Daphnia may survive for surprisingly long periods in dilute watery solutions of salicylates. The action of salicylate can be traced to the presence of bacteria which utilize salicylates as nutrients in various ways.

With Dr. Otto J. Plescia and Mr. Myron Leon, Dr. Michael Heidelberger has continued studies on the complement of the blood. With Mr. Harold Markowitz, study of the specific polysaccharide of Type 18 pneumococcus has been undertaken. Dr. Heidelberger has found two synthetic commercial polyglucoses, originally intended for use as plasma extenders, to be quite reactive with a number of antipneumococcus horse sera. This study should uncover the relation between various sugar linkages and immunological specificity. With Mr. Arnold Powell, he is continuing his study of the relation of the —SH groups of proteins to their immunological activity. Dr. Heidelberger, with Dr. Elliott Middleton has continued the immunological study of the factor in mouse milk concerned with mammary cancer. These studies have been supported by the Rockefeller Foundation and the Department of Defense. Dr. Robert S. Gordon has separated in high concentrations, the cold agglutinin associated with acquired hemolytic anemia and has established it as being a gamma globulin. The immunochemical characteristics of this material are being studied.

Dr. Daniel L. Larson, with aid from the American Cancer Society, completed his quantitative studies of antibody formation in various types of leukemia. With Dr. Helen M. Ranney he is studying abnormal forms of hemoglobin in various types of anemia with the technique of filter paper electrophoresis. He is also continuing studies on C-antibody and C-reactive protein in blood serum in various disease states.

Drs. John R. West, John A. Wood and James K. Alexander have made studies on the cause of dyspnoea in patients with chronic valvular heart disease in the absence of pulmonary congestion. Studies of cardiac output with the technique of radio-isotope injection are being extended as are

attempts to determine the oxygen tension in whole blood by polarographic determinations. Dr. John L. Laragh, a Fellow of the New York Heart Association, has demonstrated the temporary amelioration of severe hyponatremia by the administration of potassium chloride. The mechanism for this change is being studied. Drs. Robert L. Levy and James A. L. Mathers with Dr. John L. Nickerson of the Department of Physiology, have continued to study the effect of various types of exercise on the work of the heart as measured by the ballistocardiograph.

In a study on the effect of the head down position in pulmonary emphysema, Dr. Alvan L. Barach and Dr. Gustav J. Beck found, by the determination of the blood gases and pH, that the more efficient alveolar ventilation which they observed was the result of an increase in diaphragmatic excursion. Relief of dyspnoea was accompanied in some cases by a rise in arterial oxygen saturation. Improvements have been made in the devices developed by Dr. Barach for mechanically induced cough. Clearing of pulmonary atelectasis took place in all of the 15 cases in which the newer apparatus has been employed. Eleven patients were freed from the respirator following exsufflation and elimination of secretions from the lungs. Physical methods of eliminating bronchial secretions have also been found to be of clinical value in 32 of 40 cases of bronchial asthma, bronchiectasis and pulmonary emphysema. In collaboration with Dr. Hylan A. Bickerman, Dr. Barach has completed a 3-year clinical study of the effects of ACTH and cortisone in bronchial asthma and pulmonary emphysema. The results of 250 courses administered to 125 cases revealed an average duration of partial or complete remission of 14 days. In calculating the duration of remission, 22 cases are excluded in which a symptom-free interval between 2 and 12 months took place. The longest remissions occurred in cases in which persistent bronchospasm was the result of either an upper respiratory infection or exposure to pollen. This research program has been supported by the Asthma Physiological Gift, the National Foundation for Infantile Paralysis Gift in the Medical School and the Pneumonia Fund in Presbyterian Hospital.

Dr. Stuart W. Cosgriff has continued and expanded studies devoted to improving methods of anticoagulant therapy. With Dr. Maryloo Spooner, Dr. Cosgriff has initiated a study of blood platelet adhesiveness in thromboembolic disease. Drs. René Wégria and Charles W. Frank with their associates have completed a critical evaluation of the usefulness and limitations of electrical countershock, cardiac massage, epinephrine and

cocaine in rescuscitation from ventricular fibrillation. They have also studied the hemodynamic effects in the heart resulting from the acute formation of arteriovenous fistulae of different sizes. They have embarked on observations concerning the effects of auricular and ventricular tachycardia on cardiac output, coronary artery flow and arterial blood pressure. These studies have been supported by the New York Heart Association and the Frueauff Foundation.

Dr. Charles A. Flood with Miss Barbara Jones has made an appraisal of a quinine resin for the determination of gastric secretion of hydrochloric acid. He has also studied the importance of esophageal reflux as a basis for symptoms and pathological changes in hiatus hernias. Dr. William B. Sherman has been completing the study of blocking antibodies in patients with ragweed sensitivity. In conjunction with the Department of Botany of the University of Miami he has studied the antigenicity of pollens and molds of the tropical portions of Florida. Dr. Kenneth B. Turner has extended his observations on the cholesterol esterifying enzyme in human serum and its importance in the diagnosis of liver disease. Dr. William H. Sheldon has continued his studies on human constitution with the aim of clarifying relationships between structural and functional variations in health and disease. Dr. George E. Daniels and his associates have carried on active investigation in the field of psychopathological factors and their somatic responses.

During 1952 Dr. Alfred Gellhorn's investigations have been continued on the mechanism of action of anti-tumor drugs. It has been found that nitrogen mustard administration leads to an accumulation of nucleic acids in the cells of regenerating rat liver. This suggests that nitrogen mustard interferes with the utilization of nucleic acids to a greater extent than with the synthesis of these important cellular constituents. Similar studies with cortisone have led to the conclusion that the hormone produces alterations in cellular metabolism which are reflected in a decreased rate of synthesis of nucleic acids. Laboratory and clinical studies of a methyl sulfone butane have been carried out. This compound has impressive carcinostatic effects on a variety of experimental tumors but clinically appears to be useful only in chronic myelogenous leukemia. A testosterone derivative has been evaluated for therapeutic efficacy in disseminated human breast cancer. Results to date indicate qualitative and quantitative similarity to testosterone propionate but less virilizing side action. These studies have been supported by the American Cancer Society, the U. S.

Public Health Service, the New York City Cancer Committee and the Damon Runyon Fund.

Limitations of space obviously prevent more detailed delineation of the research program of members of the Medical Service. Also a number of studies in progress have not even been listed. It is hoped, however, that the above brief summary may indicate the scope and intensity of the investigative effort.

Neurological Surgery

J. Lawrence Pool, M.D., *Director*

The year 1952 represents an all time high for the total number of major and minor operations and diagnostic procedures performed in one year by the Service of Neurological Surgery. There were close to 850 major operations in 1952 as compared with 750 in 1948. Prior to 1948 the average was less than 600 per year. Since January 1, 1948, the annual number of major operations has increased 38.5%.

Including diagnostic measures such as ventriculograms and arteriograms but not myelograms, the annual number of minor operative procedures prior to 1948 was less than 300; less than 600 in 1951, and nearly 700 in 1952. This increased figure for minor procedures reflects not only the larger volume of all types of cases being treated, but in particular the larger number of arteriograms now being done. Within the past three years for example, arteriograms have increased at the rate of approximately 100 per year. Equally time consuming are myelograms. While close to 200 were done in 1948 by the Neurosurgical Service alone, more than 360 have been done by our Service in 1952. The number of all these minor procedures together gives a total for 1948 of 520 and for 1952 of 1,066, which represents an increase since 1948 of 105%. Together these figures indicate for our Resident Staff an increase in their work burden of 71.7%. Since 1948 however, our Resident Staff has been increased by only two members (from six to eight) which represents a gain in manpower of only 33.3%. It is seriously hoped that this discrepancy will not be aggravated by any curtailment of residents.

A small but beautifully equipped Ventriculogram Room was completed on the Tenth Floor of the Neurological Institute during the summer of 1952. This new operating room, designed to speed the handling of cases, has already gone a long way towards fulfillment of its mission, and warm thanks are expressed to those who arranged for the construction of this room. In addition, new air conditioning equipment has been installed to replace the obsolete apparatus that had been servicing our two large operating rooms.

A dinner was given in honor of Dr. Byron Stookey on September 27, 1952 to mark his official retirement earlier in the year and to celebrate his long years of faithful clinical and teaching service at the Neurological Institute. The dinner was attended by past and present residents and members of the Neurosurgical Attending Staff.

Dr. J. Lawrence Pool was elected President of the American Academy of Neurological Surgeons for the year 1952-1953 at the Annual three day Meeting of the Academy in New York City, September 29—October 2, 1952. The first day of this meeting was held at the Neurological Institute where members of our Neurosurgical Staff and Medical Center co-workers presented a series of scientific papers. During the year in New York City and elsewhere, Dr. Pool has presented papers on the following subjects: "Cervical Disc Syndrome"; "Occult Sacral Meningoceles in Adults"; "Parameters of Excitation of the Motor Cortex in Man"; and "Neural Structures of the Mind." Dr. Pool continues as a Scientific Director of the Yerkes Laboratory for Primate Biology at Orange Park, Florida. On September 25, 1952 his operation for removal of a herniated cervical disc was televised in color for the Annual Meeting of the American College of Surgeons.

Dr. Pool has continued investigative work concerned with improved methods of treatment for psychotic patients in conjunction with some of the staff of the New York State Psychiatric Institute. He is also cooperating in a combined research project directed at biochemical treatment of malignant brain tumors, work which has been made possible by a gift to the University of the John Gunther Memorial Fund and other memorial funds for this purpose. He is also participating in laboratory studies of nerve transmission related to the treatment of tic douloureux, and electronic control of nerve functions.

During the year 1952, Dr. John Edwin Scarff published a paper on "Nonobstructive Hydrocephalus. Treatment of Endoscopic Cauterization of the Choroid Plexus. Long Term Results."

Dr. Fritz Cramer has written a paper on "The Cerebellar Hemangioblastomas" and is co-author of "A Textbook of Orthopedics" published by the W. B. Saunders Co.

Dr. Lester Adrian Mount has written seven papers during the year on the diagnosis, dynamics and treatment of intracranial aneurysms and

other intracranial vascular malformations. He is Chairman of the Program Committee for the Neurosurgical Society of America and the New York Society of Neurosurgery, and Vice-President of the New York Society of Neurosurgery. Dr. Mount's research projects include a study of blood pressure in the arteries of the brain and carotid arteries before and after carotid ligations and other procedures; observations on the collateral circulation of the brain; and a new technique of using the Selverstone clamp for carotid ligations.

Dr. Edward Bruce Schlesinger has published a paper on the "Rehabilitation of the Neurologically Handicapped," another on "Factors in the Pathogenesis and Diagnosis of Spastic Paraparesis Due to Cervical Cord Compression," and a third on "Syndromes of Cervical Root Compression." He is engaged in research on the dynamics of the cerebral circulation with reference to cerebral edema. In September of 1952 he was Chairman of the Panel on Radioactive Isotopes at the Annual Meeting of the Neurosurgical Society of America.

Dr. Thomas John Bridges, Jr. has been elected to membership in the Harvey Cushing Society, and has read papers on "Induced Hypotension in Neurological Surgery" and on "Digital Pneumoplethysmograph Changes in Response to Nerve Root Stimulation." His research work includes a study of induced hypotension in neurological surgery, a cinegraphic study of brain circulation, methods of recording changes in cerebrovascular dynamics, an evaluation of measures to relieve pain, and observations on the effects of adrenal substitutes and adrenal metabolites on personality changes.

Dr. Joseph Ransohoff has been elected to membership in the Harvey Cushing Society and the Congress of Neurological Surgeons. He has presented and written papers on the following subjects, in most of which he is a vigorous investigative worker: "Posttraumatic Leptomeningeal Cysts with Skull Erosion" with Dr. Juan Taveras; "Electrical Excitability of the Human Motor Cortex" with Dr. Pool and Dr. Murray Glusman; "Treatment of Hydrocephalus by Ventriculo-peritoneal and Ventriculo-pleural Anastomosis" with Dr. Robert Hiatt; "Evaluation of Surgery in the Treatment of Mental Illness"; and "E.C.G. Responses to Stimulation of the Uncus, Temporal and Frontal Lobes" with Dr. Norman Sloan.

Dr. James Bethune Campbell has been active in research and his projects include the following: Stereotaxic Placement of Beta Emitting

Radioactive Material for the Creation of Subcortical Lesions in Animal Brains; A Study of the Neurophysiology of the Urinary Bladder in the Paraplegic Cat; A Study of the Possibility of Obtaining Remote Electronic Control of the Urinary Bladder in the Paraplegic Cat, initiated by Dr. Pool; A Study of the Reaction of Colloidal Suspensions of Beta Emitting Substances in the Subarachnoid Space in Laboratory Animals, and A Histological Study of Gamma Radiation (Radon) in Situ in the Brain of the Monkey. The radioactive isotope particle studies have been made possible in large part by the generous support of the Eli Lilly Company grant to the University.

Dr. Charles A. Carton, Resident, presented an excellent paper on the "Effect of Previous Sensory Loss on Appearance of Herpes Simplex Following Trigeminal Sensory Root Section" before the Neurosurgical Forum of the American College of Surgeons in September. He has also published two papers on this subject during the year.

During 1952 members of the Attending Staff have traveled for professional reasons to Vancouver, British Columbia, Paris, France, Sweden, Chicago, Cincinnati, Augusta and Sea Island, Ga., Hartford and Detroit.

In conclusion, the Attending and Resident Staffs wish to express their warm thanks to the Trustees, the President, and the Executive Vice-President of the Presbyterian Hospital, to the Nursing Staff and other Personnel for their great help and cooperation in meeting the problems of the expanded volume of work in the field of Neurological Surgery.

Neurology

H. Houston Merritt, M.D., *Director*

The number of patients treated on the Neurological Service during the year 1952 continued at the high level of recent years. Several members of the resident staff were released to the Armed Services but they were quickly replaced by veterans who had returned after completion of a term of service in military stations in the United States, Japan or Korea. One Clinical Fellow, Major James F. Hammill, was assigned to the Neurological Service by the United States Army. After completion of his training at the Neurological Institute, Major Hammill will return to the Army as a leader in their program for neurological patients.

Dr. Henry A. Riley and Dr. L. Beverley Chaney retired as Chiefs of the West and East Neurological Services in September and these two Services have now been combined. As a result of the unification of the Services, more responsibility is placed in the hands of the visiting physicians assigned to the individual wards. Dr. Riley will continue to lend a guiding hand in the care of the patients and the administration of the Service until his retirement in 1953. Dr. Chaney will continue in this same capacity for several years.

Dr. Gilbert H. Glaser resigned in October to take the position of Assistant Professor of Medicine at Yale University, where he will be in charge of Neurology at the Grace-New Haven Community Hospital. Dr. Saul Korey left us in July for an appointment as Associate Professor of Neurology at Western Reserve University in Cleveland. He will direct the program of research in Neurology and with Dr. Clark Randt, one of our former residents, will have charge of clinical neurology at Lakeside Hospital in Cleveland.

Dr. Christian Herrmann, Resident Neurologist in 1951-52, was awarded a Fellowship by the United States Public Health Service to continue his training in Neurology, with particular attention to experimental methods in electrophysiology. Dr. Walter Freygang, Assistant Resident in 1951-52, was awarded a Fellowship by the National Foundation for Infantile

Paralysis to work in the neurophysiological laboratories but was called into the Armed Service after two months of his Fellowship. Dr. Lewis P. Rowland, formerly Assistant Resident, was awarded a Ryle Fellowship by the Medical School to assist in the teaching of students and to carry on experimental work in the laboratories of neuropathology under Dr. Abner Wolf. Dr. Lillian F. Strange, Assistant Resident in 1950-52, was awarded a Fellowship by the United States Public Health Service but her untimely death prevented her from starting her work on metastatic carcinoma of the nervous system under Dr. Abner Wolf.

With deep regret we announce the death of Dr. Bernhard Dattner. Dr. Dattner joined our Staff in 1945 and was faithful in his duties until a few weeks prior to his death from a brain tumor. He contributed greatly to the training of our house officers because of his special knowledge of infections of the nervous system and cerebral localization.

The Resident Staff continued their interest in clinical research. The contributions read before the New York Neurological Society and the American Neurological Association included: Activation of Herpex Simplex by Trigeminal Section by Dr. Charles A. Carton; Involvement of the Nervous System in Relapsing Uveitis with Recurrent Genital and Oral Ulcers (Behcet's Syndrome) by Dr. Christian Herrmann; and, Metastatic Carcinoma of the Leptomeninges by the late Dr. Lillian F. Strange. During the year members of the staff contributed over fifty publications, including three books.

The work in the Electroencephalographic Laboratory under Dr. Paul F. A. Hoefer has continued to increase in volume. Over 5,000 routine electroencephalographic or electromyographic studies were performed during the year. In addition there were more than 200 specialized electroencephalographic studies particularly directed toward the localization of cerebral lesions by activation of focal abnormalities in the electroencephalogram. Among the clinical research studies by Dr. Hoefer and other members of the department were: The effect of anticonvulsant therapy on seizures and on the electroencephalogram in patients with idiopathic epilepsy; Measurements of the refractory period of human striated muscle in normal subjects and in cases of myopathy; Review of the clinical and electroencephalographic findings in verified brain tumors, 1940-1952; Frequency analysis of occipital alpha activity in normal sub-

jects prior to and during flicker fusion; and, Rationale and limitations of the EEG in clinical neurology.

Dr. Hoefer and Dr. Henry Aranow of the Medical Service, have continued their studies of myasthenia gravis. Several new compounds have been tested in an attempt to find a more efficient form of therapy than that in present use, namely, neostigmine.

Dr. Sidney Carter and Dr. Daniel Sciarra have furthered their studies of the pathogenesis and therapy of convulsive disorders in adults. Numerous compounds have been tested for their anticonvulsant properties in patients. The Children's Convulsive Disorder Clinic, which was initiated last year has been very active. This clinic which is conducted jointly with the Pediatric Service, gives a comprehensive medical and psychological treatment to children with convulsive disorders. In addition, clinical and experimental studies on the psychological and physiological factors in the convulsive disorders of children, were conducted. The studies on the convulsive disorders of adults and children were aided by grants from the Association for the Aid of Crippled Children and grants to the Medical School by Parke, Davis & Company, and the Lazrus Foundation.

Dr. Lewis Doshay and Dr. Kate Constable have continued their work with patients with paralysis agitans. Dr. Adolfo Zier under a Fellowship in the Medical School from the Maltbie Laboratories, is working with Dr. Doshay in an attempt to quantitate by physiological methods, the tremor and rigidity of these patients and to measure the effects of various therapeutic agents on these symptoms. The work of Dr. Doshay and his colleagues is being assisted by grants to the Medical School by the Eli Lilly Company, The Upjohn Company, Lederle Laboratories, Smith, Kline & French, and Berkeley Industries.

Clinical studies in cerebral palsy were conducted in the Vanderbilt Clinic by Dr. Sidney Carter in conjunction with members of the Pediatric and Physical Medicine Services. Experimental work in the pathophysiology of abnormal movements and increased muscular tone were conducted by Dr. Malcolm Carpenter, Dr. John R. Whittier, and Mr. Christian Hovde, in the neurophysiology laboratories under Dr. Harry Grundfest and Dr. Fred Mettler. The role of infections and other noxious influences on the embryo in relationship to the development of cerebral

palsies continued to occupy the attention of Dr. Abner Wolf and Dr. David Cowen in the Neuropathology Laboratory. An exhibit of these physiological and pathological studies was presented at the annual meeting of the American Medical Association. The clinical and experimental work in cerebral palsy was aided by grants to the Hospital and the Medical School, by the United Cerebral Palsy Association.

In connection with the National Research Council's Subcommittee on Shock program for the development of plasma expanders, Dr. Elvin A. Kabat and Miss Deborah Berg have shown that purified dextran is antigenic in man. Injection of quantities of dextran as small as 1 mgm. gives rise to precipitins and wheal and erythema skin sensitivity in a substantial proportion of individuals. Together with Dr. Gerard A. Turino of the National Research Council and Colonel Arthur B. Tarrow of the Lackland Air Force Base, it was possible to demonstrate that there was a very good statistical correlation between skin sensitivity to native dextran in individuals not previously injected with dextran and the development of allergic reactions on intravenous infusion of Swedish dextran. A very low incidence of reactions to commercial solvents dextran was associated with lower average molecular weight, better fractionation to eliminate high molecular weight constituents and the use of a dextran with a relatively low degree of branching.

With Dr. Edward E. Fischel of the Department of Medicine, and Dr. Herbert C. Stoerck of the Merck Institute for Therapeutic Research, Miss Ada E. Bezer and Dr. Kabat have shown that antibody production to egg albumin injected with the Freund adjuvants containing killed tubercle bacilli is substantially enhanced over that obtained when the tubercle bacilli are omitted from the adjuvant emulsion. The enhanced antibody production was associated with a local granulomatous response to the tubercle bacilli at the local inoculation sites, as had been found by Drs. Kabat and Wolf, and Miss Bezer, for the disseminated encephalomyelitis produced in Rhesus monkeys using brain tissue with the Freund adjuvants. Studies on the effect of cortisone on the antibody production of egg albumin emulsions containing tubercle bacilli are in progress to complete the parallelism between the disseminated encephalomyelitis and a purified antigen.

Dr. Sidney Leskowitz in Dr. Kabat's laboratory is engaged in the development of a method for the quantitative estimation of glucosamine

and chondrosamine, two amino sugars which occur in the blood group substances. Dr. John H. Vaughan is engaged in a study of the skin sensitizing properties of antibodies in relation to their combining power with antigen. Miss Gloria Petrilli continues the determination of gamma globulin in cerebrospinal fluid. Dr. Melvin D. Yahr, Dr. Sidney Goldensohn and Dr. Kabat will summarize the results at a conference at the New York Academy of Sciences in April. The experimental studies of Dr. Kabat and his co-workers were aided by grants to the Medical School by the United States Public Health Service and the Office of Naval Research.

The work in the Neurophysiology Laboratories under Drs. Fred A. Mettler, Harry Grundfest and David Nachmansohn, have been concerned with the fundamental aspects of bioelectric phenomena, neurophysiology of the central nervous system and their clinical application.

A technic for microinjection of ions and other substances into the single fiber giant axon of the squid has been combined with microelectrode recording of the bioelectric changes resulting from the altered axonal composition. New data have been obtained on the relation between resting and action potentials. Startling results were obtained with intra-axonal injections of various drugs carried out with the aid of a micromanipulator by Drs. Nachmansohn, Mario Altamirano, Grundfest, C. Y. Kao, and Mr. Robert Chambers. Curare and acetylcholine in fractions of lug had a powerful effect on axonal conduction. These findings are a conclusive and striking support of the view that the failure of these drugs to affect fiber conduction is due to a permeability barrier, protecting the active membrane against these compounds, a view which Dr. Nachmansohn has maintained for years.

The single electrogenic units of the electric eel provide convenient and useful material for the study of bioelectric phenomena. It has also been possible for Drs. Grundfest, Nachmansohn, Altamirano and Kao, to prepare units with intact normal innervation. This preparation is therefore useful for the study of phenomena of neuron transmission. Extensive studies have been continued which provide new information on the mechanism by means of which the eel is capable of producing very high voltage discharges; the mechanism of activation of the single units; the effects of drugs on the bio-electric phenomenon and on the transmission process.

Direct measurements of the ion movements during activity using radioactive tracers have been extended with a new technic by Drs.

Grundfest, Nachmansohn, Irwin B. Wilson, Mr. E. Amatneek and Mr. E. Berkowitz. Dr. Nachmansohn has continued work on various chemical, physicochemical and physical aspects of nerve function. The investigations on the fundamental mechanism of conduction of nerve impulses have now reached the molecular level. The studies of Dr. Irwin B. Wilson on the molecular forces in the surface of the proteins involved in the elementary process of conduction have been most valuable in obtaining a more precise picture of the function of acetylcholine in the generation of bioelectric currents. They have, moreover, thrown new light on the mode of action of various drugs, especially curare and curare-like compounds and local anesthetics. Dr. Wilson, assisted by Dr. Estelle Meislich, has continued his studies on the reversal of cholinesterase inhibition by alkyl phosphates with a great number of specially synthesized compounds. These studies have not only a theoretical interest; alkyl phosphates are the most powerful chemical warfare agents known and the possibility that their action may be reversed is obviously of great practical importance. Dr. Wilson has also developed a method in which acetylcholinesterase activity can be determined in the intact nerve. This made it possible to measure enzymatic activity and to record the action potential simultaneously. In this way it has been conclusively shown that the two events are inseparable.

Dr. Malcolm Carpenter and Dr. Leonard L. Zinker have traced the potentials evoked in the thalamus upon stimulation of the brachium conjunctivum, dentate nucleus, and various peripheral nerves. Cortical potentials were also recorded. Dr. Carpenter continued these studies by attempting to record from the subthalamic nucleus and has also been studying the chronic effects of destruction of the red nucleus. By electrophysiological methods, Dr. Sidney Cohen studied the sensory dermatomal overlap in the divisions of the trigeminal nerve. Mr. Stanley Crain, together with Dr. Margaret Murray of the Department of Surgery and Dr. Harry Grundfest have recorded the intracellular resting and contrasting potentials of cardiac muscle cells cultured in vivo. This group has also continued its attempt to record from nerve cell culture. Mr. Christian Hovde has extended his studies of the projections of the striatum to an examination of the putamen. With Mr. Harlan Stearns, Mr. Hovde has also been studying the causes of striatal death. Dr. John Whittier has continued enlarging the Department's collection of film dealing with abnormal movement and has conducted a study of carnivore encephalomyelitis and investigated the efficacy of several pharmaceutical

preparations with regard to their possible use in abnormal movements. He has published "Graphic Analysis of Ballism and Related Dyskinesias." Drs. Carpenter and Whittier have published a "Study of Methods for Producing Experimental Lesions of the Central Nervous System;" and Dr. Carpenter with Dr. Stanley Penney, has published: "Feline Trunkal Ataxia" and also a communication on vascular abnormalities.

The investigations in the laboratories of Drs. Mettler, Grundfest, and Nachmansohn are aided by grants to the Medical School from the United States Public Health Service, The Surgeon General of the Army, The Atomic Energy Commission, and the United Cerebral Palso Association.

The follow-up study of wartime peripheral nerve injuries by Drs. Grundfest, Ernst Herz, Joseph Moldaver, Melvin D. Yahr and Miss Jean Hawley, supported by a grant to the Medical School by the Veterans Administration has completed its clinical phase and the analysis of the results obtained by this study and that of four other centers set up by the Veterans Administration and the National Research Council is now in progress. The peripheral vascular changes associated with denervation and reinnervation have been the subject of an extensive investigation.

An attempt to evaluate the effectiveness of various dental anaesthetics using several new quantitative methods are being conducted by Drs. Grundfest, Joseph Fiasconaro and Harold Sherman of the Columbia Dental School under a grant to the Medical School from the Novocol Corporation.

Dr. Nachmansohn gave a series of lectures on various aspects of nerve function in Paris, where he received the Pasteur Medal from the Société de Chimie Biologique. In Rome, Dr. Nachmansohn was the guest of the Instituto Superiore di Sanita. He also gave lectures in Switzerland, Naples and in Israel, where he attended a symposium organized under the auspices of the Hebrew University Hadassah Medical School. Dr. Abner Wolf received the Weinstein Award of the United Cerebral Palsy Association for his work on the effects of infections in the mother on the development of the fetal nervous system. Dr. Maximilian Silbermann was Official Delegate of the American Neurological Association to the Second International Poliomyelitis Congress in Copenhagen. Dr. H. Houston Merritt was again elected Secretary of the American Neurological Association and President of the Association for Research in

Nervous and Mental Disease. The latter Association held its annual meeting in New York in December and discussed Toxic and Metabolic Diseases of the Nervous System. Dr. Robert Loeb, Director of The Medical Service was Vice-President of this Association. Other contributors to the scientific program from our Hospital included Dr. Irving M. London, Dr. Gilbert Mudge and Dr. Franklin M. Hanger of the Medical Service, Drs. Gilbert H. Glaser and Paul F. A. Hoefer from the Neurological Service, Dr. Emanuel M. Papper of the Anesthesia Service and Dr. Harry M. Rose from Microbiology.

The Neurological Institute was host to the American Board of Psychiatry and Neurology in December. Approximately three hundred candidates for certification in Psychiatry and Neurology were examined by the Board.

The Annual Meeting of the Alumni of the Neurological Institute was held on December eleventh. Approximately one hundred and fifty alumni were present. Dr. Stanley Dillenberg, President of the Alumni Association, prepared an interesting scientific program at which the research and clinical activities of the various members of the Institute were presented.

It gives me great pleasure to express my thanks to the entire staff for their sincere cooperation throughout the year. Especial thanks are extended to the Trustees, the Administrative and Nursing Staffs of the Hospital for their invaluable assistance. We are particularly indebted to Dr. J. Lawrence Pool and the staff of the Neurosurgical Service for their fine spirit of cooperation in the care of patients and the instruction of the resident staff of the Neurological Service. We also wish to take this opportunity to express our thanks to Dr. Robert Loeb and Dr. Rustin McIntosh for their invaluable assistance. The assignment of residents to the Neurological Service by the Medical and Pediatric Services has been a great stimulus to the work of the Neurological Service and has obviated the danger that Neurology will lose close contact with Medicine and Pediatrics.

Nursing

Margaret Eliot, R.N., *Acting Director*

Throughout the past year the Nursing Service has been making an earnest effort to use its entire personnel to the maximum of their capabilities in the better care of the patient. To this end we have been developing the team method of patient care since early fall. This is a plan whereby professional and non-professional nursing personnel work together in planning, giving and evaluating patient-centered care to a specific group of patients. A committee consisting of Miss Cecile Covell, Miss Marion D. Cleveland and Miss Lillian Oring was appointed to work on this new concept of patient care. Of considerable help in the preliminary planning for this team method of patient care was the Nursing Care Study Committee. Composed of two members of the committee mentioned above and four representatives from the Hospital's Administrative Staff, this group, meeting weekly, was concerned primarily with relieving nursing personnel of non-nursing activities.

A special in-service program of 15 hours, in addition to the 10 hours basic course, prepares nurses' aides and other auxiliary workers for participation in the team. Concurrently, discussion groups for head nurses, team leaders and team members have met. A pilot study was made on two units, Presbyterian Hospital—11th Floor and Neurological—9th Floor. This study proved to be most successful and the team has been extended to Presbyterian—10th and 17th Floors and Neurological—4th Floor.

Throughout Harkness Pavilion a modified team plan has been put into operation by Miss Helen L. Scott and the results have been most satisfactory. Group Nursing is being continued on Harkness Pavilion—11th Floor Annex and our plan is to extend this type of service.

The total number of nursing personnel on the Nursing Service has increased and as of December 31 is 1,105. Our largest increase the past year has been in graduate registered nurses who wished to avail themselves of the professional opportunities at the Columbia-Presbyterian

Medical Center. The turnover in the graduate nurses' group is 43%. We are endeavoring to increase the number of practical nurses on the staff.

On July 15, through the generosity of the Trustees, the salary differential for evening duty was increased to $40.00 per month and for night duty to $20.00.

Two tuition-free "refresher courses," 60-hours each, have been given during the year—one in May and one in October. The graduate professional nurses who participated in these programs had not been active in nursing for several years and were keenly interested in the new medicines, equipment and techniques. As a result of these courses and in accordance with the terms, 34 nurses stayed and worked with us at the regular staff salary, either full-time or part-time. Six more of these nurses joined our Registry to do private duty. They are all a great help.

The graduation exercises for the 89 members of the Class of 1952 were held on June 3 and as last year the lawn near Maxwell Hall was used as the setting. Mr. W. E. S. Griswold, Jr., Secretary of the Board of Trustees and Chairman of the Nursing Committee, gave a very interesting and delightful address, pointing out the historical significance of the location of our particular area. Mr. Griswold also told the young graduates that they were going out into a career of great promise and great privilege, "equipped with the best there is in nursing education." Everyone was inspired by his talk. Sixty percent of the Class has returned to the Medical Center since graduation for duty on our graduate nursing staff; 13.5% has married; 10% is doing psychiatric nursing, most of whom are at the New York State Psychiatric Institute; 10% is working in other hospitals and the remaining 6.5% is doing Public Health nursing.

We are glad to report that Miss Ruth M. Guinter has returned from her duties at the American University Hospital at Beirut and has been appointed Supervisor on Presbyterian Hospital 12th Floor.

Although Miss Anne Penland transferred to the Department of Anaesthesia about a year ago, when she retired July 1, we still considered her one of the Nursing Department. Miss Penland will be greatly missed throughout the Hospital by her many and devoted friends.

Miss Lillian Brown transferred to the Administrative Staff as Unit Manager of the Presbyterian Hospital on November 15.

It is with sincere sorrow that we report the death of Miss Phyllis L. Partridge on January 17, 1952. Miss Lucille D. Manning was appointed in her place as Night Supervisor, Presbyterian Hospital.

Committees of the graduate staff nurses are very active in planning staff education programs, social functions and other activities. They are also studying the better use of auxiliary nursing personnel and the standardization of hospital equipment.

Through the generosity of their Women's Auxiliary a full-time recreational therapist has been assigned to the Orthopedic Unit, Presbyterian Hospital 5th Floor. This therapist works with the children and teen-age boys in their hospital environment.

As in previous years, the Hospital has again made clinical areas available for the field work of students enrolled in the Division of Nursing Education at Teachers College, Columbia University. During October and November, ten students spent two half-days a week giving total nursing care to selected patients on the medical and surgical floors.

At the Babies Hospital 26 graduate students, specializing in pediatric nursing, were assigned to the various floors for experience in the care of children, including the care of premature babies.

Seven students in the advanced course in obstetric nursing had their field work for antepartal and postpartal clinic service and delivery service arranged in the Sloane Hospital for two days each week throughout the first college semester.

During the summer, a two-day symposium on poliomyelitis was held at the Neurological Institute, sponsored by the Nursing Department.

Throughout the year the Nursing Service was represented at nursing conventions and all important nursing meetings in the area. The New York State Nurses Association and the New York State League of Nursing Education held a joint annual meeting on October 12-16 at the Roosevelt Hotel and Miss Ruth M. Guinter, Miss Miriam Hubbard, Miss Frances

Salter and Miss Beatrice Ainslie were the delegates from the Presbyterian Hospital. In connection with these meetings, two demonstrations were held here—one at the Babies Hospital and the other at Neurological Institute. The week of March 17, Miss Cecile Covell and Miss Marion D. Cleveland attended an Institute on Nursing Service Administration in Boston. The theme of the Institute included (1) Better use of our nursing personnel and (2) Contributions of our service departments towards better nursing care.

The civil defense program of the Nursing Department is still in operation and classes are being continued. Four of the graduate nurses have left the staff during 1952 on leaves-of-absence for military service.

Early in January we had the privilege of entertaining Miss Anna Neagle, "first lady of the British screen," at Maxwell Hall. Miss Neagle presented to the Florence Nightingale Collection a replica of the lamp used by Miss Nightingale in the Crimean War. Miss Patricia Nutter, President of the Class of 1953, accepted the gift.

Other foreign guests at Maxwell Hall during the year were Miss Paula Hegarty from St. Thomas Hospital, London, Miss Dorothy Pringle from Leeds Maternity Hospital, Leeds, England, and Miss Rebecca Lipschitz of the Hadassah Hospital in Jerusalem.

Miss Frances S. Beck, a graduate of Guys Hospital School of Nursing in London, is with us at Maxwell Hall for the year 1952-1953. She was awarded the first Anna C. Maxwell Fellowship for graduate study at Teachers College, Columbia University.

We are grateful to Mrs. Earl Harkness for her continued interest. The curtains in Sturges are a great addition and the recreation room, too, has been much improved by its new color scheme. We have again extended the hospitality of Maxwell Hall to other groups at The Medical Center and we are glad to have them share it with us.

The advertisement, prepared for the June issue of The American Journal of Nursing, has also appeared in the September and November issues. The response has been good and it is felt that this is an important project to continue.

We all appreciate very much the addition of The Pauline A. Hartford Memorial Chapel to The Center.

The Nursing Department thanks the President, the Board of Trustees and the Administration for their understanding and co-operation. My personal thanks also go to all the members of my staff for their fine spirit and loyalty.

Obstetrics and Gynecology

HOWARD C. TAYLOR, JR., M.D., *Director of Service*

It seems proper this year to mention in the first paragraph what appears to be the outstanding achievement of the Service during 1952. In previous reports of the Sloane Hospital, reference has been made to the maternal mortality rate as the traditional measure of success of obstetrical management. Throughout the United States this figure has, in the last 15 years, steadily declined. During the last twelve months at the Sloane Hospital the mathematical ultimate was attained and there were no maternal deaths. While this record is not unique, it is the first time it has been attained in this Hospital and is perhaps especially noteworthy in a Service receiving, by reference, a relatively high percentage of complicated cases. To have no losses among 3,696 deliveries is a reflection of the skill and devotion of the entire staff, nurses, attendings and residents.

Dr. Royal C. Van Etten, for many years Attending Obstetrician and Gynecologist to the Hospital, having reached the official age of retirement, became Consultant on July 1, 1952. Although less active in recent years, Dr. Van Etten's earlier clinical contributions to the Hospital were very great and his retirement can be received only with an expression of appreciation for his many services. Dr. Gray H. Twombly, who had come to the Hospital in 1947 as Assistant Attending Obstetrician and Gynecologist, resigned in November 1952 to become Professor of Gynecology and Associate Director of the Gynecologic Division of the University (New York) Hospital. Dr. Twombly's special interest had been gynecologic cancer. His loss will be keenly felt by the Service, this feeling being mixed with a sense of satisfaction that the Service has been able to supply a man for a key post in a neighboring institution.

Two younger men, Dr. David B. Moore and Dr. Landrum B. Shettles, both former residents on the house staff, have been appointed to the Attending Staff as Assistant Obstetricians and Gynecologists. Dr. David B. Moore, who was a member of the residency staff both before and after the war, graduated from the resident staff on June 30, 1952, and immediately began work as an Assistant Attending on a part-time basis. Dr. Shettles,

who had received his doctor's degree in zoology and had done notable work in that field before he began the study of medicine, completed his residency on the Gynecological and Obstetrical Division of the Hospital a year ago. He was then awarded a five-year Markle Fellowship and, after a year spent in Europe, has returned here to do full-time work.

There have been two resignations during the year, those of Dr. William E. Pollard, Assistant Attending Obstetrician and Gynecologist, and Dr. John B. Hoffman, Assistant in the clinic. These men have developed practices in Princeton and Greenwich respectively, and have now found it impossible to devote adequate time to the Services.

Three Clinical Fellows have been connected with the Service during the last year: Dr. Hector E. Bernal, Dr. Benjamin de Almeida Passos, and Dr. Walter E. Hermann. Dr. Bernal and Dr. Passos came to us from the Federal Security Agency with Fellowships under the Buenos Aires Convention and have acted solely as observers. Dr. Hermann of Geneva, Switzerland, has been a salaried Research Assistant working in the clinic with Dr. C. Lee Buxton on a sterility problem.

After the extensive work of the previous years, construction work in the wards of the Division was slight. Showers and other bathroom facilities were added on the ward floors, a change made necessary because of the new principle of early ambulation for both gynecologic and obstetric patients. The doctors' sitting room on the Labor Room Floor has been equipped with a small collection of recent books on obstetrics and gynecology. A new portrait of Dr. Benjamin P. Watson, painted by his wife, Angele Watson, has been hung there.

CLINICAL REPORT

The total number of patients delivered on the Obstetrical Service last year was 3,696, an increase of ninety-eight over the previous year. The larger number was attributable chiefly to the semi-private division, the increase on the ward service being slight and there being even some decrease on the private service. The total of gynecological operations, 1,790 in number, remained about the same as in recent years.

The absence of maternal mortality has already been noted. The "perinatal mortality", i.e., the stillbirths and neonatal deaths showed a relatively low figure, namely 25 per 1,000 live births.

In this respect, it is interesting to note the trends in recent years. The following tabulation shows the average figure for the years 1941-1950, for 1951 and for 1952, on the private and semi-private and on the ward services:

	1941-1950	1951	1952
Private and Semi-private	25.4	22.7	22.7
Ward	37.3	25.9	29.3

It will be noted that a low figure for the private services was attained some years ago, but that in the last two years, the rate for the ward deliveries has dropped to a figure approaching that for the private services. The difference between the ward and private figures is now relatively slight and probably no more than can be accounted for by the social, economic and racial factors that are known to be so important in their effects on infant survival.

RESEARCH PROGRAM

On account of the wide field of subject matter encompassed by the specialty of Obstetrics and Gynecology, the research activity has had its usual somewhat diverse characteristics.

Analysis of Clinical Case Work

Attention during the last year has been devoted principally to the review of the clinical work in several obstetrical subjects. The results of breech delivery have been studied for the ten year period of 1940 to 1950 by Dr. C. P. O'Connell. Dr. Robert Hallet has been working on the problem of anesthesia in obstetrics and has completed a paper, "The Conduct of Labor and the Results with Continuous Caudal Anesthesia". An analysis of the causes of fetal mortality at the Sloane Hospital during the years 1940-1949 has been made by Dr. Charles M. Steer, which has resulted in emphasizing certain points where improvement may be made. It has also indicated certain trends, related to the social and economic status of the patient, which affect fetal mortality rate and which are more or less beyond the range of effectiveness of the Hospital staff.

Other clinical fields of work have been a study of vesicovaginal fistula, completed by Dr. D. Anthony D'Esopo and Dr. H. Clay Frick, and con-

tinuing work on the problem of urinary stress incontinence by Dr. D'Esopo and Dr. Arnold Fenton. It is significant that interest in this important area should be increased. A number of clinical papers have also been published on the clinical aspects of cancer therapy, namely "Ovarian Carcinoma. Etiologic and Clinical Factors" by Dr. Equinn W. Munnell; several papers by Dr. James Corscaden, and continuing work by Dr. S. B. Gusberg to be noted under a different heading. Dr. Alvin J. B. Tillman has continued his special interest in the medical aspects of pregnancy, in particular the problem of hypertension complicating gestation.

Fertility and Endocrinology

In the continued attempt to solve the major problem of infertility, which apparently affects about one in ten married couples in the United States, Dr. Buxton has begun a major investigation of the possibilities of minor bacterial infection being the cause of a considerable percentage of the present unexplained cases of sterility. With a generous grant to the Medical School from the United States Public Health Service, he has set up a research project to study the bacteriology of the cervix in fertile and infertile women with the clinical assistance of Dr. Walter Hermann and Dr. Grace Girvin, an experienced bacteriologist.

The subject of adrenal virilism is under investigation by Dr. Joseph Jailer and his group. They have learned to make the distinction between adrenal hyperplasia with its physiologic activity and adrenal tumors and have produced five publications during the past year on the subject in this general area.

At a level still more fundamental in a technical sense Dr. Seymour Lieberman, the biochemist of the Department, has been working on methods for the study of the urinary end products of the hormones of the adrenal and sex glands. With Dr. Sylvia Teich, he has been investigating the preparation and cleavage of steroid glucuronidates, the invitro metabolism of various steroids and the chromatographic methods for the qualitative and quantitative estimation of small groups of urinary steroids. The development of these techniques, although at present in a biochemical or biophysical phase, should yield important tools for the clinical investigation of endocrine problems in the rather near future.

Beside the approach to the problems of endocrinology and fertility through hormone studies, anatomical and morphological work has been

continued. Dr. Margaret Long, working with Dr. Earl T. Engle, has completed a study of the localization of lipids and cholesterol in the ovaries of a series of clinical cases. Dr. Landrum B. Shettles is embarking on an investigation of the maturation and fertilization of the human ovum and has continued his work on the characteristics of the cervical mucus. The study of the endometrium in cases of uterine bleeding without organic morphology has been undertaken by Dr. Ferdinand H. Flick with Dr. Equinn W. Munnell.

Physiology of Pregnancy and Toxemia

During the last six months there has been set up under the supervision of Dr. Albert Plentl, one of the senior residents on the Service, a laboratory capable of making special and precise measurements of deuterium oxide, radioactive sodium and other substances necessary for the determination of distribution of water and electrolytes under various physiological conditions such as normal pregnancy, toxemia of pregnancy and major surgery. Dr. Plentl with three other members of the resident staff is investigating the rate of water turnover in pregnancy, the use of exchange resins in the toxemias of pregnancy, and the sodium metabolism, sodium space and total sodium content in normal and abnormal states of pregnancy. The work under the supervision of Dr. Plentl, a graduate in chemistry as well as in medicine, has had the support of a grant-in-aid to the Medical School from the United States Public Health Service and from several pharmaceutical houses.

Two other aspects of the physiology of pregnancy are also being studied. Dr. Byron C. Butler is working on the fibrinolysin system in relation to toxemia of pregnancy and, under Dr. Lieberman's direction, Dr. Robert Richter is studying the normal curve of excretion of corticoids during pregnancy.

Physiology of Labor

Some years ago a new procedure of some importance was put into use on the Obstetrical Service of this Hospital and in a number of others. This consisted of the use of pitocin, a special fraction of posterior pituitary hormone, to stimulate uterine contractions. The pharmacological effect of this substance had been known for many years but its use had been considered dangerous, probably because it had always been administered in large and rapid dosage. Beginning a few years ago, the manner of administration was changed so that it is now given in a very

dilute solution by intravenous infusion, one drop at a time. A dose that was formerly given by a single injection now takes from an hour to one hour-and-a-half to administer. This technique has now been employed in many hundreds of cases on this Service, both for the induction of labor when that appears to be necessary and for the stimulation of the uterus when labor is prolonged as a result of ineffective contractions. Dr. D. Anthony D'Esopo with the assistance of Dr. David B. Moore is analyzing the experience with this procedure. Also concerned with the problem of labor has been the work of Dr. Jerome Harris, co-author of a book entitled "The Clinical Measurement of Uterine Contractions", and the continued work of Dr. Charles M. Steer on the so-called electrohysterograph.

The Fetus and the Newborn

During the last year a monthly conference for the Service in collaboration with the pathologists of the Pediatrics Service was organized under the supervision of Dr. D. A. D'Esopo. Concerned entirely with the discussion of the fetal and neonatal deaths of the previous month, this conference and the assistant residents' participation in the autopsies are in accordance with plans of the Obstetrical and Gynecological Service and recognizes the enormous importance which fetal loss is assuming in the field of obstetrics. The findings should be an important source for future clinical investigations.

Research in Gynecologic Cancer

Research in gynecologic cancer has continued to be active, partly because of the statistical importance of malignant tumors in this area and partially as a result of the stimulation afforded by generous support from the MacMillin Fund, grants to the University from the United States Public Health Service and the Damon Runyon Memorial Fund.

An important aspect of the research in gynecologic cancer has been the study of the effects of large doses of progesterone, a steroid derived from the ovary, which has been, it is alleged, effective in the improvement of cancer of the uterine cervix. The clinical results attained over the last year have not, however, been encouraging, but there has been obtained valuable information on the chemical nature of the urinary end products of progesterone. The relationship of the steroids to cancer has also been studied by Dr. Gray H. Twombly, who has utilized radio-

actively tagged substances to trace the physiologic course of the steroids to various possibly susceptible organs in the human body.

There have also been active morphological studies on gynecologic cancer. Dr. S. B. Gusberg's laboratory has prepared a further paper on the histochemical studies of abnormal growths of the human endometrium and progress is being made on the very important problem of the practical separation of radiosensitive and radioresistant uterine tumors on the basis of the morphological examination through a series of biopsies. The characteristics of the quality of malignancy are also being studied in other ways. Dr. Harold Tovell has obtained a grant to investigate the transplantability of human ovarian tumors into the anterior chamber of the guinea pig's eye, this being one of the few areas in which human tumors will grow in the tissues of another species. A broad program was begun on the investigation of degrees of malignancy in cancers of the ovary and the uterus, by correlating histological observations with biochemical reactions and the results of biochemical analysis for content and type of nucleic acid. This latter project is being carried on by Dr. Margaret Long and Dr. D. V. N. Reddy, under the general supervision of Dr. Seymour Lieberman and Dr. Howard C. Taylor, Jr.

EXTRAMURAL ACTIVITIES

Members of the Service have also engaged in a number of activities outside of the Hospital and assumed a number of responsibilities related to their profession. Dr. Earl T. Engle, Professor of Anatomy, presented the William Fletcher Shaw biennial lecture of the Royal College of Obstetrics and Gynecology in London on October 10, 1952, and gave a number of subsequent lectures at other places in Europe, including Birmingham and Copenhagen. Dr. Seymour Lieberman received the Annual Ciba Award for his work in endocrinology. Dr. Benjamin P. Watson was the visiting Stieglitz Professor of Obstetrics and Gynecology at New York University in February. Dr. C. P. O'Connell was elected to the New York Obstetrical Society.

Drs. Buxton and Engle are both serving as consultants in obstetrics and gynecology to the United States Naval Hospital in St. Albans, and Dr. Buxton is also serving as consultant in gynecology to the Institute for Crippled and Disabled Children. Dr. Buxton is currently Chairman of the Section of Obstetrics and Gynecology of the New York Academy of Medicine, and

Assistant Secretary of the New York Obstetrical Society. Dr. Taylor has been made Chairman of the Medical and Scientific Committee of the American Cancer Society, and on January 1, 1953 will take over as Co-Editor, in partnership with the Professor of Obstetrics and Gynecology of the University of Chicago, the editorship of the American Journal of Obstetrics and Gynecology, following the retirement of the present Editor, who has served since the founding of the Journal in December, 1919. Dr. Harold Speert is serving as Associate Obstetrician and Gynecologist at Mt. Sinai Hospital in addition to his work at the Presbyterian Hospital. Various lectures outside the Presbyterian Hospital have been given by Dr. C. Lee Buxton, Dr. Earl T. Engle, Dr. Joseph Jailer, Dr. Marion D. Laird, Dr. S. B. Gusberg, Dr. Jerome Harris, Dr. A. J. B. Tillman, Dr. H. C. Taylor, Jr., and others.

At the time of writing this report the principal need of the Service is no longer for adequate laboratory space, which was so long cited as the principal problem, but for an adequate personnel of full-time staff members and for the support of their work. The collection of a group of men in obstetrics and gynecology whose primary interest is academic and scientific meets with several special difficulties. One of these is the relative lack of scientific tradition in this specialty in spite of the apparent challenge to investigation that the problems of human reproduction seem to offer. Another is the large amount of time required to attain the necessary manual dexterity before the perhaps impatient potential investigator may begin his chosen work. There is finally the increasing disparity between the salaries available for full-time workers and the incomes prevalent in the practice of the various branches of clinical medicine. These are some of the obstacles which stand in the way of the organization of a small group of full-time workers within the staff of the Service of Obstetrics and Gynecology. It is hoped that in time these obstacles may be overcome.

Ophthalmology

John H. Dunnington, M.D., *Director*

When The Institute of Ophthalmology was officially opened on January 16, 1933, the late Dr. Nicholas Murray Butler was its first patient. During that year 1,619 patients were admitted and 1,421 operations performed. This year there were 2,566 admissions and 2,470 operations. The growth of the clinical activities has been steady—slowed down only by the lack of space and facilities. Even more striking has been the increase in its investigative activities. In the first report of the Institute for the year of 1934 there is mention of four research projects, whereas during 1952, twenty clinical problems have been studied. Since during this time few structural changes have been made the growth of the department has been almost solely due to the cooperation and zeal of its members. To each and every one of them I express my sincerest thanks.

It is with regret that announcement is made of the resignation of Dr. Ramon Castroviejo to accept the directorship of the ophthalmological service of St. Vincent's Hospital. His great enthusiasm and tireless energy were a constant stimulus to all. The sudden death of "Bill" Turner, our operating room orderly, has deprived the Service of one of its most efficient and loyal workers. Dr. Arnold W. Forrest and Dr. Ira S. Jones, former residents, have joined the staff as Assistant Ophthalmologists. Eleven visiting scholars studied with us during the past year—eight of whom were from foreign countries. Two distinguished guests addressed our staff—Mr. T. Keith Lyle, Chief of Ophthalmology, Westminster Hospital, London, and Dr. Franz von Brücke, Director of the Pharmacological Institute of the University of Vienna. The annual alumni meeting was held on May 2nd and 3rd, at which time thirteen scientific presentations were given by members of the staff. Dr. Rustin McIntosh, the then Chairman of the Medical Board, was the guest of honor at the dinner. The increasing interest in these gatherings is evidenced by the return of 40 alumni out of the total of 49 graduates. Their loyalty and continued support are most stimulating.

During 1952 scientific papers were presented by members of the Service before numerous local, state and national societies. Among them were: The Eye Section of the New York Academy of Medicine, of which Dr. Willis S. Knighton is Chairman; The New York State Medical Society; The Section of Ophthalmology of the American Medical Association; The Association for Research in Ophthalmology; The American Ophthalmological Society; The American College of Surgeons, and The Pan-American Congress of Ophthalmology. At the annual meeting of the American Academy of Ophthalmology and Otolaryngology twelve members of the staff gave instructional courses and Dr. Algernon B. Reese showed a most instructive film on "The Kronlein Operation for Removal of Orbital Tumors." Dr. John H. Dunnington delivered the Schneider Lecture before the Inter-State Postgraduate Medical Assembly in Cleveland. He also attended the meetings of the Oxford Ophthalmological Congress and the International Council of Ophthalmology in Oxford, England.

Dr. Reese gave a total of eight talks during his visit to Australia and New Zealand, where he was the guest of honor of the Australian Ophthalmological Society. He was elected to honorary membership in both the Australian and New Zealand Ophthalmological Societies and received the degree of Doctor of Medicine (Honoris Causa) from the University of Melbourne. Dr. Ludwig von Sallmann was the coordinator of a symposium on "Pharmacology of Drugs Used in Ophthalmology" at the Pan-American Congress of Ophthalmology in Mexico City, and presented papers before the National Research Council Meeting in Washington, the Radiation Research Society in New York, the Association for Research in Ophthalmology in Chicago, and at the Radiation Laboratory of the University of California in Berkeley, California. Dr. John P. Macnie gave instructional talks at the Lancaster Postgraduate Course in Ophthalmology at Portland, Maine. Doctors Raynold N. Berke, Dunnington, Macnie, Raymond L. Pfeiffer and Joseph A. C. Wadsworth participated in the program of the American College of Surgeons Meeting in New York. Dr. Berke was one of the guest speakers at the ophthalmological meeting of the State University in Syracuse. Drs. Reese, Frederick Blodi and John C. Locke received a certificate of merit for their exhibit on retrolental fibroplasia at the meeting of the American Medical Association in Chicago.

During the past year members of the Service have held the following positions: Dr. John H. Dunnington, Chairman of the American Board

of Ophthalmology and member of the Council of the American Academy of Ophthalmology and Otolaryngology; Dr. Algernon B. Reese, Chairman of the Council of the American Ophthalmological Society; Dr. Gordon M. Bruce, Editor of the Transactions of the American Ophthalmological Society and member of the American Board of Ophthalmology; Dr. Maynard C. Wheeler, Secretary-Treasurer of the American Ophthalmological Society and Chairman of the Qualifying Committee on Ophthalmology of the New York State Compensation Board; Dr. LeGrand H. Hardy, member of the Orthoptic Council; Dr. Charles A. Perera, Assistant Editor of the Transactions of the American Ophthalmological Society, and Dr. John P. Macnie, a member of the Home Study Faculty of the American Academy of Ophthalmology and Otolaryngology. Dr. Dunnington was awarded an honorary LL.D. degree by his alma mater, Hampden Sydney College. Drs. Andrew de Roetth, Jr. and John C. Locke obtained the Degree of Doctor of Medical Science from Columbia University.

Under the auspices of the Dunlevy Milbank Fund Drs. Reese, Blodi and Locke have continued their investigations on retrolental fibroplasia. This work done in close collaboration with Dr. Richard Day of the Pediatrics Service has greatly added to our knowledge of this condition. Among the facts established by this study are, that the basic pathologic process which may be present at birth is a neovascularization extending from the retina towards the vitreous, and that spontaneous regression may occur at any stage of its development. They have shown that neither excess of oxygen nor exposure to light is responsible for this condition. They are encouraged by the results of X-ray treatment in the early stages of the disease but as yet no definite conclusions have been reached on either the etiology or treatment of this baffling disease of prematurity.

Among other research studies being continued are: Ocular Wound Healing by Drs. Dunnington and Ellen F. Regan; Evaluation of Tonography in the Diagnosis and Treatment of Glaucoma by Drs. Willis S. Knighton and de Roetth, Jr.; Ocular Manifestations of Thyroid Disease by Dr. Robert M. Day in collaboration with Dr. Sidney Werner of the Department of Medicine, Relationship of Pathology of the Vitreous to Detachment of the Retina by Dr. Joseph A. C. Wadsworth; Radiotherapy on Retinoblastoma and Allied Conditions by Dr. George R. Merriam, Jr.; Tumors of the Lacrimal Gland by Dr. Arnold W. Forrest; The Effects of Variations in the High Frequency Current on the Tissues of

the Eye by Dr. Graham Clark in his study on the Treatment of Detachment of the Retina; Factors Influencing Absorption of Blood from the Vitreous by Dr. Ludwig von Sallmann; Herpes of the Cornea by Dr. Regan in collaboration with Dr. Harry M. Rose of the Department of Microbiology and Seasonal Incidence of Antibiotic Producing Bacteria in the Ocular Flora by Dr. D. Locatcher Khorazo in association with Dr. Seymour Halbert also of the Department of Microbiology. During the past year Dr. Robert L. Wiggins reported on The Use of Polymxin B in the Treatment of Infections with Pyocyaneus Bacillus. He has shown that this substance is effective in arresting the infection in a large percentage of cases.

There has been no great change in the clinical activities during 1952, but particular interest has been focused on some therapeutic problems. The surgical techniques of the operations for blepharoptosis and orbital tumors have been revised as the result of studies conducted by Dr. Raynold N. Berke. The operative results on detachment of the retina have been improved through technical refinements instituted by Dr. Graham Clark. Increased consciousness of the value of adequate closure of cataract incisions has resulted from the studies of ocular wound healing by Drs. Dunnington and Regan. Much attention has been given to the methods of securing adequate preoperative sedation and the value of early ambulation has become fully recognized. Drs. Maynard C. Wheeler and Philip Knapp by enlarging the activities of the muscle clinic have not only increased interest in this phase of ophthalmology but also have added to its instructional value. As a natural consequence of this enlargement the work in the orthoptic laboratory has increased. Its chief technician, Miss Nancy Capobianco, who is a member of the Committee on Instruction of the American Orthoptic Council presented a paper before the Orthoptic Symposium at a recent meeting of the American Academy of Ophthalmology and Otolaryngology.

The work of the Department and Service has been made possible through the generous aid which we have received from many sources. Notable among our contributors are: The Dunlevy Milbank Fund, The Sloan Foundation, The Whitehall Foundation, The Harriman Fund, The Snyder Fund, The Marie Haye Clemens Fund, Mr. Nathan Straus and Mr. Irving Levy. In addition there are several who prefer to remain anonymous whose gifts have aided us not only in financing research projects but also in acquiring equipment for teaching. To all of our

benefactors I extend my sincerest thanks for their continued interest and loyal support. The gratitude of the entire staff is theirs for all of us realize that but for their generosity our work could not have progressed.

Orthopedic Surgery

Alan DeForest Smith, M.D., *Director*

One of the interesting results of the move of the New York Orthopaedic Hospital to the Medical Center has been the change in the type of patients treated in our wards. There has been a notable increase in the number of those having other important medical and surgical complications. This, of course, is due to the referral of these cases from the other services. It emphasizes the interdependence of all branches of medicine, and confirms the validity of the reasons for the merger of the New York Orthopaedic Dispensary and Hospital with the Presbyterian Hospital.

The trend toward an increase in the average age of the patients treated in our clinic and wards continues. This probably will continue for a long period, because of the increase in the average age of the population, which produces more elderly patients with fractures of the hip and degenerative arthritis. The better control and treatment of a number of diseases affecting children, such as tuberculosis of joints, and rickets, accounts for the decline in the number of these patients.

The opening of the Strong Memorial Wing at the Mary Harkness Convalescent Home has provided an important and necessary facility for the younger orthopedic patients who need convalescent hospital care, but who do not require all of the services of the Hospital. The provision of a school room and physical and occupational therapy units in the new wing make it possible to give these children complete care. Nursing service is provided so that bed cases may be treated.

On January 1, 1952, Drs. Keith McElroy and Alexander Garcia were appointed Assistant Attending Orthopedic Surgeons and Instructors in Orthopedic Surgery. Both had completed residencies and fellowships at the New York Orthopaedic Hospital. Dr. McElroy is assigned to the Orthopedic Service and Dr. Garcia to the Fracture Service.

Drs. Halford Hallock, Alan DeForest Smith and Frank E. Stinchfield attended the meeting of the Orthopedic Associations of the English speak-

ing world in London in July. Dr. Stinchfield read a paper on the treatment of osteoarthritis of the hip. Dr. Robert Carroll was invited to address the Norwegian Surgical Society in June and following this, visited clinics in Norway and Sweden. Dr. McElroy visited a number of clinics in Italy during October.

Investigations of a number of clinical problems have continued during the past year. At a joint conference held by the staffs of the Orthopedic and Neuro-Surgical Services to discuss lesions of the intervertebral discs, a plan was made for the study of these patients in a combined clinic, which should be helpful in the development of our knowledge and understanding of the conditions.

Several studies have been pursued in problems related to the hip joint including congenital coxa vara, an analysis of anatomic specimens from slipped upper femoral epiphyses, central dislocation of the hip, and fractures of the femoral neck following radiation. A study was also made of the indications and contra-indications for arthrodesis, arthroplasty and replacement prostheses in arthritis of the hip.

Other investigations were made of conditions affecting the shoulder including shoulder fusions, recurrent anterior dislocations and posterior dislocations of the joint. A study was also made of resected humeral heads and a comparative study of the effects of iso nicotinamides in the treatment of tuberculous bone and joint lesions was initiated.

In the clinic 6,350 new patients were seen and 32,408 return visits were made. A total of 1,314 patients received 29,751 days of treatment on the wards of the Orthopedic Service.

Otolaryngology

Edmund P. Fowler, Jr., M.D., *Director*

The most worthwhile development in the ear, nose and throat service during 1952 was the transfer of endoscopy from the 18th floor operating room to a new suite, and the modernization of the facilities on the 11th floor. Team nursing was employed on the Service, and although conclusions have not been drawn, it has been an interesting experience for those participating.

Dr. Fernand Montreuil has resigned to become Chief of the Ear, Nose and Throat Service of the Notre Dame Hospital, Montreal, Canada; Dr. Robert Hui and Dr. Peter Westerhoff have joined the staff as Assistant Otolaryngologists. Miss June Abercrombie was promoted to chief operating room nurse, and Miss Eva Wohlauer, to head nurse on the 11th floor. Dr. Gregory Dwyer has been called to military service. We welcome to the staff Mr. John Trethowan of Guy's Hospital, London as an exchange fellow with Dr. Irwin Ginsberg, under arrangement with Guy's Hospital and the Josiah Macy Jr. Foundation.

The head and neck division, previously under the direction of Dr. John M. Hanford, is now directed by Dr. Joseph J. McDonald. Arrangements have been made for residents from general surgery and from ear, nose and throat to alternate as chief residents on the head and neck division. Attendings assigned to the head and neck division are as follows: Dr. Stanley L. Lane, from Oral Surgery, Dr. George F. Crikelair from Plastic Surgery, Dr. Daniel C. Baker, Jr. and Dr. DeGraaf Woodman from the Otolaryngological Service.

Dr. Franz Altmann was guest of honor at the Annual Austrian Otolaryngological Congress and was elected a member from Austria to the International Collegium Oto-laryngologicum, a society of doctors conducting research in diseases of the ear, nose and throat limited to a maximum of ten members from each country. In Zurich in September, at a meeting of the International Collegium Dr. Edmund P. Fowler, Jr. delivered a paper on "Supersenisitization of Denervated Tissues".

Dr. DeGraaf Woodman was guest of honor of the Section on Otolaryngology of the Royal Society of Medicine in Manchester, England. He also visited several cities in Europe, discussing and demonstrating his operation for bilateral abductor paralysis of the larynx.

Dr. Altmann lectured on the histopathology of the ear at the University of Minnesota in Minneapolis. He published a paper on "Anomalies and Malformations of the Inner Ear" and with Dr. A. Purdy Stout and Dr. Irwin Ginsberg published a paper on "Cancer in situ of the Larynx". Dr. Paul Lindenberg and Dr. Fowler, presented a paper on "General Practice, Industrial, Military and School Audiometry" before the New York State Medical Society. Dr. James W. Babcock participated in a radio broadcast on "The Mastoids" for the New York County Medical Society.

Publications from the Otolaryngological Service during the year included: "Language Habilitation in a Post-encephalitic Child" in the American Journal of Mental Deficiency and "Notes on Speech Therapy for Parents of Children with Cerebral Palsy" in British Council for Welfare of Spastics by Shulamith Kastein; "The Audiometer Weber Test as a Means of Determining the Need and Type of Masking" in the Annals of Otology, Rhinology and Laryngology by Donald Markle, Edmund P. Fowler, Jr. and Henri Moulonguet.

The Lester N. Hofheimer Speech and Hearing Clinic continues to be studied as a model clinic by educators and otolaryngologists who come from all parts of the world. Other audiology clinics are now following it as a prototype.

Dr. Jules G. Waltner and Dr. Albert R. Kolar have been working separately on the various problems of pneumatization of the mastoid bone. Dr. Waltner is also engaged in several other research projects, notably those on the origin of the endolymph. Dr. Daniel C. Baker, Jr., Dr. George R. Brighton, and Dr. Woodman conducted extensive studies of stereoscopic fluoroscopy and found that, with the machine available this method of removing foreign bodies was definitely inferior to the use of a biplane fluoroscope.

Dr. Fowler and Dr. Adolf Zeckel of the Department of Psychiatry have continued their studies on the psychosomatics in Otolaryngology,

with the help of Dr. Dorothy Loynes of Pilgrim State Hospital. Dr. Fowler has continued his studies on the use of procaine in the treatment of Meniere's disease and the use of various anti-biotics in external otitis.

The several subjects under investigation have been carried on with the aid of special funds, for which grateful acknowledgement is made to: The Hayden Fund for the Coakley Memorial Clinic; The Philip Hanson Hiss, Jr. Memorial Fund, for bacteriological studies; and special grants from the Research Council of the American Otological Society for studies in otosclerosis; the Abbott and Lilly Corporation for studies on circulation; and the United States Air Force for research on vestibular thresholds.

During the year there were 1,955 patients admitted to the Service in Presbyterian Hospital, 1,042 admitted to the Babies Hospital; 1,722 operations performed in Presbyterian Hospital; 939 operations performed in Babies Hospital; 3,411 admissions to the Vanderbilt Clinic.

Pathology

Harry Pratt Smith, M.D., *Director*

An overall increase in the number of autopsies has made apparent the need for additional resident staff, especially in the Division of Pediatric Pathology. The situation has been aggravated by the sudden drafting of Dr. Donald King, chief resident in General Pathology, into the Army. Working contact with the Services of Medicine and Surgery has been strengthened by monthly conferences, at which cases of mutual interest are reviewed. Similar conferences are held between the Pediatric and Neuropathology Divisions, and the corresponding clinical services.

Dr. Joseph E. Flynn has continued as Editor of the Transactions of the Conferences on Blood Clotting and Allied Problems, sponsored by the Josiah Macy, Jr. Foundation. He is also on the editorial board of a new journal "Circulation Research." Dr. Dorothy Andersen is a member of the Committee on Neonatal Mortality for the New York Academy of Medicine. Dr. David Cowen was promoted to the rank of Associate Attending Pathologist. The annual award of the United Cerebral Palsy Associations, Inc. was given Dr. Abner Wolf for his work in the past year.

The research activities of the department have been continued. Drs. Robert W. Coon and Flynn continue their studies on the interrelation of the blood clotting factors. They reviewed the literature on The Fundamentals of Blood Clotting for the Annual Review of Physiology. Dr. Joseph Seronde, Jr. has continued his work on antithrombin and the heparin co-factor. Dr. Wellington B. Stewart is studying the influences of diet and anemia on iron absorbtion and storage, and the factors that may influence survival of red blood cells.

The Division of Orthopedic Pathology, under the supervision of Dr. C. Zent Garber is engaged, in addition to its routine duties, in research projects on the chemical synthesis and animal inoculation of a compound found in association with giant cell tumors; the continuation of observations on the significance of hemorrhage in the production of several types

of bone lesions; the influence of ultrasonic waves on the solution of bone, and the acceleration of healing of bone transplants by an additive agent.

The Division of Neuropathology has carried out routine neuropathological examinations, and has acted as neuropathological consulting service to the affiliated hospitals of the Medical Center. Its research program, under the direction of Drs. Abner Wolf and David Cowen on prenatal factors as a cause of damage to the nervous system has continued. The work on disseminated encephalomyelitis has been carried forward in collaboration with Dr. Elvin Kabat of the Department of Microbiology and the Neurological Institute. Studies on experimental amyloidosis of the nervous system have been initiated. Investigation of tumors of the central nervous system has been continued.

Research activities under the direction of Dr. Dorothy Andersen have included continuation of investigations of celiac disease and other projects. A donation from the United Fruit Company has made possible physical alterations of the laboratory devoted to these studies.

The percentage of necropsies to deaths for the year ending December 31, 1952, follows:

Services	*Percentage*
Babies Hospital	81
Harkness Pavillion	39
Medicine	60
Neurological Institute	50
Obs. & Gyn.: Adults	20
Neonatal	70
Ophthalmology	100
Orthopedic Surgery	22
Otolaryngology	57
Surgery	58
Urology	32
Vanderbilt Clinic	0
Average	57

Pediatrics

Rustin McIntosh, M.D., *Director*

During 1952 the Pediatric Service gave 50,743 days of care to 4,360 inpatients, and in the pediatric division of Vanderbilt Clinic the number of visits totaled 45,339. Experience shows that these are reasonable numbers of patients for the teaching responsibilities involved in the Medical School program with its existing quotas of third and fourth year students.

In comparison with the extensive physical changes made in the Hospital in the previous year, those of 1952 seem of relatively less ambitious scope; yet they are of considerable significance in the operation of the plant. Of greatest importance is the installation of two modern high-speed elevators to replace the cars which had been in service since the opening of Babies Hospital. On the 8th floor a waiting room for parents was provided, and in Vanderbilt Clinic the facilities for interviewing and assigning patients to proper destination were greatly improved, thus promoting the efficiency of this essential operation and curtailing the waiting time of patients and their parents.

The resignations of Dr. Rose G. Ames and Dr. Mary E. Hyman were accepted with great regret. Dr. Rodman Gilder and Dr. Robert West have been granted leaves of absence during their return to active service with the Navy. New appointments include those of Dr. William A. Bauman and Dr. Ruth A. Davis as Assistant Pediatricians, and of Dr. Mary R. Richards as Clinical Fellow.

Various members of the staff have given talks or lectures at pediatric gatherings, the most far-flung being Dr. Hattie E. Alexander's participation in the International Antibiotic Congress held in Paris under the auspices of the International Children's Center of UNESCO. Later, in the Netherlands, she addressed a group of physicians from the universities of Amsterdam and Leyden. Dr. John Caffey was guest lecturer at the University of Texas in Galveston, at Baylor University in Houston,

at the opening of the Le Bonheur Children's Hospital in Memphis, and at the meeting of the North Pacific Pediatric Society held in Sun Valley. Other talks, given by members of the Service before a variety of professional and lay groups, kept somewhat closer to Manhattan.

Dr. Alexander's active investigative program includes studies of bacterial genetics, pursued with Miss Leidy and Dr. Stephen Zamenhof; of genetic mutuations in filterable viruses, with Dr. Katherine Sprunt; and of the therapy of tuberculosis with combinations of the various newer antibiotic agents, with Dr. Douglas S. Damrosch. Some of these studies are supported by grants to the University from the United States Public Health Service and the National Institutes of Health, others by the National Foundation for Infantile Paralysis. Dr. Rose G. Ames, while holding a fellowship in the Department of Pharmacology, carried out an ingeniously designed and highly rewarding study of renal physiology and renal response to various hormonal stimuli in newborn infants, both premature and mature. Her work received support from the Playtex Park Corporation. Dr. Dorothy H. Andersen, with the collaboration of Dr. Paul A. di Sant' Agnese, Dr. John M. Brush and Dr. Paul A. Wilson, has continued her investigations of chronic nutritional disorders with the aid of a generous grant from the United Fruit Company.

Dr. Richard L. Day has uncovered new leads in his search for the pathogenesis of nuclear jaundice, having succeeded in reproducing in experimental animals certain manifestations of the clinical disease. In a follow-up study of the late results of erythroblastosis fetalis in early life he has shown that severe jaundice secondary to neonatal isoimmunization tends to be associated with a lowered intelligence rating in early childhood. An ingenious adaptation of new principles to the construction of apparatus for expanding collapsed lungs has enabled him to overcome atelectasis in experimental lung preparations and in a small number of clinical trials has appeared to provide a more effective device than has hitherto been available for the initiation of respiration in infants who fail to start breathing properly immediately after birth. Some of these studies have had support from the Mortimer Gift for the premature infant program, others from the U. S. Public Health Service to the University.

Continuing observations in premature infants, in which both Dr. Day and Dr. William A. Silverman have participated, have adduced

evidence that a number of much publicized hypotheses regarding the cause of retrolental fibroplasia are untenable, thus sharpening in some measure the focus of future search. In these studies of abnormal conditions of the eyes in early life there has been constant and close cooperation between the pediatric staff and the staff of the Institute of Ophthalmology.

Observations which had their inception in the laboratory of pathological anatomy have led Dr. Henry G. Dunn, the L. Emmett Holt Fellow, into a study of the biochemical abnormality which might account for finding oxalate crystals in unparalleled quantities and at unprecedented sites in a child with disturbed bone growth. A comparable study, involving both anatomical and biochemical methods for gauging the consequences of thiamin deficiency, has been carried out by Dr. Ruth Alice Davis.

Dr. Alice Goodfellow, holding the Henry Koplik Scholarship, has made observations on blood formation in premature infants and, together with Dr. Dorothy H. Andersen and Dr. William A. Silverman, has measured some of the effects of corticotropin and cortisone on growth and adrenal cortical involution in early life. New technics have been applied by Dr. Ruth C. Harris to the evaluation of liver function. Dr. Mary R. Richards has joined the group that Dr. Katharine Merritt organized for the study of illnesses in pregnancy which adversely affect the development of the fetus. This project, which involves close cooperation between the Obstetrical and Pediatric Services, has aroused interest among public health officers and others who keep close watch of morbidity and mortality statistics; for a number of years it has received support from a grant to the University from the Rockefeller Foundation, and assurance has now been given that the Association for the Aid of Crippled Children will join in fostering it in the near future.

Dr. Conrad M. Riley has received help and encouragement in his studies of nephritis and nephrosis by reason of the loyal support of parents and friends of patients with these diseases. They have eagerly seized the initiative in fund raising and have not only enabled him to purchase additional apparatus and supplies for laboratory investigations but in addition helped to provide him with technical assistance, and they have shouldered the cost of publication of a pamphlet which he wrote especially for the parents of nephrotic patients, to try to help explain the condition

to them. Dr. Riley's observations of examples of familial autonomic dysfunction, a syndrome which he was one of the first to describe in comprehensive terms, have been elaborated and extended. In this connection he has organized, with the participation of Dr. William S. Langford and Miss Marjorie J. Eustis, classes in group psychotherapy for the parents and guardians of these patients, an extension of pediatric practice which represents an effective innovation. Dr. James A. Wolff has continued his studies of diseases of the blood, with special reference to their differentiation and treatment.

Mention should be made, as was done in last year's report, of the pilot study of accident repeaters, carried out under the direction of Dr. Langford with the assistance of Dr. Rodman Gilder, Dr. Virginia N. Wilking and others, and aided by a grant from the Metropolitan Life Insurance Company. The purpose of the study has been not so much to establish differences between the accident group and the control group of children as to explore methods by which an investigation might be directed at a larger population with the hope of evolving in due time an effective program of accident prevention. Dr. Langford's progress report, presented at a joint meeting of the National Safety Council and the American Academy of Pediatrics in Chicago, was received with great interest. In the American Orthopsychiatric Association Dr. Langford has held the office of treasurer, and in the Group for the Advancement of Psychiatry he has been chairman of the committee on child psychiatry.

It has been our good fortune to welcome a number of visitors to the Service in the course of the year. Several have been kind enough to address the staff more or less formally, and among their number may be mentioned Dr. Bernard D. Davis, Professor Robert Debré, Dr. René J. Dubos, Dr. Frank L. Horsfall, Jr., Professor R. A. McCance, and Dr. Maclyn McCarty.

Thanks are due to the professional staff, to the nurses and to the entire administrative force for their faithful devotion to duty and for their spirit of cooperation which has made the past year one of solid accomplishment.

Physical Medicine and Rehabilitation

Robert C. Darling, M.D., *Director*

Physical Medicine and Rehabilitation was given the status of a separate service on January 1, 1952. With this move there was no intent to change basically the well-established clinical services of Physical and Occupational Therapy in the various parts of the Hospital. Full credit should be given to the Medical Service for sound development and growth of these clinical services over the years.

An important event strengthening the new Service was the tripartite affiliation effective January 31, 1952 between The Presbyterian Hospital, the Institute for the Crippled and Disabled and Columbia University. This move culminated the growth of active collaboration between the three institutions since the University and the Institute first became affiliated in 1947. Thus there is now over-all unity of medical direction of the rehabilitation services in the Hospital and the Institute, which extend from the acute illness to the return to work or a new job. Likewise, in the training of physicians and ancillary personnel and in basic and clinical research, the three institutions now present a unified program.

Upon the establishment of the new Service, Dr. William B. Snow became Attending Physician, with the added Hospital title of Director of Clinical Physical Medicine. Dr. Robert C. Darling upon assuming the Directorship of the Hospital Service also became Chairman of the Medical Board of the Institute for the Crippled and Disabled. Dr. Edward E. Gordon, the newly appointed Director of Medical Services at the Institute, was appointed Assistant Attending Physician in Vanderbilt Clinic and is in regular attendance at the Hospital to facilitate the smooth handling of clinical problems involving both institutions. Dr. Morton Hoberman was promoted to Assistant Attending Physician.

With the addition of the Strong Memorial Wing to the Mary Harkness Convalescent Home, a program of physical and occupational therapy and therapeutic recreation has been started under the direction of Dr. Snow.

Not only the large volume of clinical service to be dispensed, but also the growth of the specialty of Physical Medicine and Rehabilitation and the great scarcity of trained physicians, have dictated the emphasis on our Residency-Fellowship program. By agreement between the Hospital and Medical School, the Fellows supported by the Baruch Gift to the Medical School hold positions of Clinical Fellows in the Hospital and have responsibilities and training similar to the single Assistant Resident in the Hospital Service. Holders of both these types of positions are given didactic instruction in basic sciences and a tour of duty at the Institute for the Crippled and Disabled in addition to their wide clinical experience in Vanderbilt Clinic and the Ward Services of the Hospital. Four doctors are at present in this comprehensive training program.

Students in the Medical School's Training Courses for Physical and Occupational Therapists continue to receive important portions of their clinical training in the Hospital. Likewise, in the Graduate Courses in Cerebral Palsy given twice yearly by the Medical School in cooperation with the Coordinating Council for Cerebral Palsy in New York City, Inc., the clinical facilities of the Hospital, particularly the Vanderbilt Clinic Cerebral Palsy Clinic, have been significantly used. These activities in training ancillary personnel for rehabilitation work are attempts to meet an acute nationwide shortage of well-trained therapists.

Members of the Service have been called upon frequently for service to the community and to their professional organizations. Dr. William B. Snow is President-elect of the American Congress of Physical Medicine and Rehabilitation, Vice-President of the Coordinating Council for Cerebral Palsy in New York City, Inc., a member of the Advisory Council on Physiotherapy to the New York State Department of Education, and a member of the Medical Advisory Committee to the United Cerebral Palsy Association. He has given several lectures throughout the country at various medical societies and Army centers, the latter in his role as Consultant to the Army, on Physical Medicine.

Dr. Robert C. Darling became a member of the Medical Advisory Committees of the United Cerebral Palsy Association and of the New York Division of New York Chapter of American Physical Therapy Association. He lectured before the session of the President's Committee on National Employ the Physically Handicapped Week in Washington, D. C. and the International Association of Insurance Accident Boards and Commissions meeting in Miami Beach, Florida.

Dr. A. D. Gurewitsch took on the added duties of Medical Director of Blythedale Hospital, Valhalla, New York. During February and March of this year he traveled widely in the Near and Far East, giving lectures and demonstration clinics in Israel, Pakistan and India. Dr. Morton Hoberman became Vice-President of the New York Society of Physical Medicine and a member of the Medical Advisory Committee of the New York City Division of New York Chapter of American Physical Therapy Associations. Dr. Cassius deVictoria, as Executive Director of the Latin American Congress of Physical Medicine, attended its meeting in Panama in February 1952. Dr. Adeline B. Gauger took part in two sessions of a panel on the Brain Injured Child at the Hunter College Chapter of the International Council of Exceptional Children. Six articles have been published this year by members of the Service.

Research activities center in part around the new constant temperature treadmill room situated in the Medical School. Work is being carried on by Dr. Darling and Miss Ethel Shea in collaboration with Dr. Paul di Sant'Agnese of the Pediatrics Service and Dr. George Perera of the Medical Service on disorders of sweat electrolytes in children with cystic fibrosis of the pancreas. Finding high sodium chloride in the sweat of these patients emphasizes a new area of involvement in the disease and explains the high incidence of hot weather casualties among these children. The analysis of the sweat may develop into a diagnostic tool, from the data of these studies.

Plans are in progress to use this special treadmill room in collaborative studies on peripheral vascular disease and in cardiac studies. The room is also available for projects of other services needing such special facilities.

Work has been completed and published by Dr. Darling and Miss Shea in collaboration with Dr. Daniel C. Tosteson of the Department of Medicine on abnormal permeability of the red blood cell in sickle cell disease. This observation is a further step toward the understanding of this common but baffling disease.

Dr. Milos Lota has been active in the development of measuring and therapeutic instruments of an electrical nature. He has developed a delicate electrical thermometer and is completing a plethysmograph for measurement of peripheral blood flow. He has also surveyed the characteristics of commercially available electrotherapeutic devices, and made graphic recordings therefrom.

Clinical research in Physical Medicine and Rehabilitation goes on steadily in the collection of careful data on the treatments given. The Cerebral Palsy Group Clinic is in essence a clinical research venture to which this specialty contributes physical and occupational therapy and a portion of the evaluation procedure. Similarly, but on a smaller scale, the Physical Medicine and Orthopedic Services jointly manage the convalescence of poliomyelitis patients in a special clinic.

The Hospital facilities for handling children with cerebral palsy are significantly supplemented by three outside agencies with whom our staff work closely and for whom Dr. William B. Snow is active consultant. The nearby Recreation Center maintained by the Committee for the Rehabilitation of Crippled Children, Inc. furnishes kindergarten type of training for pre-school children upon our referral; two new classes for Cerebral Palsy at Public School 85 in the Bronx serve the patients in the Cerebral Palsy Clinic when indicated; St. Giles Home in Garden City continues to serve as an important facility for in-patient care of patients referred from the Cerebral Palsy Clinic.

During the year, 46,079 patient visits were made to the Physical and Occupational Therapy Services and a total of 184,423 treatments were given. Distribution of these treatments was as follows: 25% to private and semi-private patients, 25% to ward patients, and 50% to clinic patients.

The Physical Medicine and Rehabilitation Service has for its basic function the maintenance of therapeutic facilities in physical and occupational therapy and consultation services within the Hospital to serve the patients on other Services for whom such treatment is essential. Beyond that, the Service takes as its responsibility the stimulation of sound thinking toward rehabilitation in its broadest aspects both among the Staff and Services within the Hospital and by the promotion of close integration with affiliated specialized institutions.

Radiology

Ross Golden, M.D., *Director*

Probably the most difficult problem encountered by the Director of the Radiological Service of any teaching hospital is the turnover in the professional staff. The Presbyterian Hospital is no exception. Dr. Ernest H. Wood resigned on May 1st as Associate Professor of Radiology to become Professor and Chairman of the Department of Radiology of the University of North Carolina, Chapel Hill. Dr. Wood did outstanding work as Chief of the Radiological Service at the Neurological Institute. Dr. Charles A. Bream, Instructor in Radiology and Assistant Radiologist at the Presbyterian Hospital, went with Dr. Wood to the University of North Carolina as Assistant Professor of Radiology. Dr. Vincent P. Collins, Associate Professor of Radiology and Chief of Radiotherapy at the Francis Delafield Hospital, resigned as of June 1st to accept the post of Professor of Radiology at the Medical School of Baylor University, Houston, Texas. Dr. Wood and Dr. Collins are respectively the fourth and fifth to leave our Department of Radiology to become heads of radiological departments in other schools of medicine. Dr. Lois Cowan Collins, wife of Dr. Vincent P. Collins was associated with our Radiological Service for ten years. Dr. Collins is an able clinical radiologist, excellent teacher, with unusual ability in administration and organization. On July 1 she resigned to go to Houston where she is busy as the devoted mother of three boys and has accepted the appointment as Associate Professor of Radiology at Baylor University. The loss of this unusually able group would be seriously felt in any radiological service, but we take pride in the fact that they have been called elsewhere to take high academic positions in radiology.

Dr. John L. Williams resigned to take a position on the Radiological Service of the Geisinger Memorial Hospital, Danville, Penn. This service is directed by Dr. Charles L. Hinkle, one of our former residents and full-time assistants. Dr. Myer Sharpe resigned in May to begin private practice in Northampton, Mass. and Dr. Frank F. Remy resigned as of June 20. Dr. Marjorie LeMay resigned as Assistant Radiologist to begin work in Boston.

In summary, during 1952 seven assistant radiologists out of a staff of fifteen resigned, and six new appointments were made.

Lt. Col. George F. Lull, M.C., U. S. Army, Commandant of the R.O.T.C. of the College of Physicians & Surgeons, after receiving two years of training in radiology at the Presbyterian Hospital, was assigned elsewhere on June 30. He was replaced by Major W. R. Scott, M.C., U. S. Army, who will also receive two years' training, which will complete the requirements of the American Board of Radiology. Dr. J. R. Mitchell, U. S. Public Health Service, was assigned to the Presbyterian Hospital for nine months, which completed his radiological training. Dr. R. B. Ormsbee, also on assignment from the U. S. Public Health Service for the same purpose, joined our group of trainees on July 1.

Dr. Russell Wigh, Assistant Radiologist of the Jefferson Hospital, Philadelphia, joined our staff as of September 1. Dr. Alfred Berne finished his residency on August 1, and continued as Assistant Radiologist. Appointments as Assistant Radiologist were given to Dr. Franklin Reed, Englewood, N. J. on June 1, and Dr. F. Mitchell Cummins and Dr. Catherine Dalton, both of New York, on July 1.

The following residents completed the prescribed three year period of training: Dr. Myer Sharpe on March 31, Dr. Alfred Berne and Dr. Andrew F. Dedick on August 1, and Dr. Julian Mandell on December 31. Dr. Mandell has received a commission in the U. S. Air Force and has been ordered to active duty. The following began the three-year service as assistant residents: Dr. Kent Ellis, January 1, Dr. Joseph M. Moynahan April 1, Dr. Ronald E. Herson July 1, and Dr. Samuel H. Madell October 1. Dr. Donald W. Johnson resigned after approximately one and three-quarters years as assistant resident, to take a commission in the U. S. Army Medical Corps.

Dr. E. Finch Parsons, who resigned his appointment as a clinical fellow on October 1, 1950, after two months of training, to enter the Military Service, rejoined our staff as a clinical fellow on December 1, to continue his training.

Dr. Eugene A. Field received a special appointment on October 1 as assistant resident on an American Cancer Society fellowship, for special work in radiotherapy. Dr. W. E. Longshore, Jr., is a Damon

Runyon Fellow for a year of training in general radiology. Drs. Ramberto Perez-Ribie and Richard M. Friedenberg are taking a third year of training as clinical fellows.

Dr. Juan M. Taveras was promoted to Assistant Attending Radiologist and was assigned to the Neurological Institute as Chief of the Radiological Division, succeeding Dr. Ernest H. Wood. Dr. Taveras was appointed Associate Radiologist at the New York Psychiatric Hospital on July 1. He was also appointed Consulting Radiologist at the U. S. Public Health Service Marine Hospital on Staten Island. These appointments were previously held by Dr. Lois Cowan Collins.

During the past year Dr. Golden attended the annual meetings of three national Radiological organizations. At its meeting in Cincinnati in December, the Radiological Society of North America awarded him its gold medal "For Services to Radiology." He presented a paper at the 4th Inter-American Congress of Radiology which he attended as a delegate of the American College of Radiology. He gave the Carman Memorial Lecture at the Minnesota State Medical Society on May 25 in Minneapolis. He gave several other papers and lectures including one at the New York Academy of Medicine and one for the American Cancer Society. He served a second year as Chairman of the Committee on Medical Education of the New York Academy of Medicine and was elected to membership in the Inter-American College of Radiology.

Dr. Harold W. Jacox continues as co-editor with Dr. Vincent P. Collins of the Radiation Therapy Section of the Year Book of Radiology. He gave two lectures to the New Jersey State Dental Society on the Radiation treatment of head and neck tumors and one on recent advances in radiotherapy at the New York Veterans Administration office, and another in Lewistown, Penn. He was elected Vice-President of the Section on Radiology of the New York State Medical Society and Secretary of the New York Roentgen Society, and Secretary of the New York Roentgen Society. He published an editorial in the journal Radiology on radiation effects on bone. He represented the Presbyterian Hospital at the Teletherapy Evaluation Board meeting in Oakridge, Tenn., and addressed the Academy of Medicine of Flint, Mich. on the use of radioactive materials.

Dr. Morton M. Kligerman with Mr. Henry G. Schaefer published a paper on "A new rotation roentgen therapy unit." Dr. Kligerman reports

that the designers and builders of this unit have presented the Hospital with a new table for horizontal rotation of the patient during X-ray treatment. Dr. Kligerman gave two lectures at Temple University Hospital, one at New York Hospital, the New York Roentgen Society, the American Radium Society and the Eastern Conference of Radiological Societies on various aspects of radiation effects and the treatment of cancer. With Dr. Edith H. Quimby and Mrs. Elaine G. Rosen, Dr. Kligerman presented an exhibit on rotation therapy techniques at the meeting of the Radiological Society of North America, which received "Honorable Mention." With various co-workers he published a paper on the treatment of cancer of the bladder and another on chemotherapy of cancer. He is making a statistical study of the effect of certain drugs on radiation sickness.

During the past year Dr. John Caffey gave seventeen lectures dealing with various problems in the X-ray diagnosis of diseases of infancy and childhood in various parts of the country. He is preparing a third edition of his text book on "Pediatric X-ray Diagnosis."

Dr. Josephine Wells published a paper on "Cor pulmonale resulting from pulmonary arteriosclerosis" in the American Journal of Roentgenology. The routine weekly conferences of the Radiological Service held Wednesday afternoons from 5 to 6 o'clock continued in her charge. During the past year Dr. Wells arranged an unusually interesting series of lectures and discussions with a number of speakers from other services and other hospitals. Among these included Dr. Isidore Snapper, Mt. Sinai Hospital; Dr. Raymond Lewis, The Hospital for Special Surgery; and Dr. Joseph Nahon of the Fort Hamilton VA Hospital.

Dr. Anthony J. Galgano presented an exhibit on some unusual features of multiple myeloma at the December meeting of the Radiological Society meeting in Cincinnati. Dr. Catherine J. Dalton was co-author of a paper on the X-ray treatment of Herpes Zoster which was presented at the Inter-American Congress at Mexico City in November.

Dr. Gerhart S. Schwarz has devised a slide rule for the correction of measurements of the maternal pelvis and the unborn baby's head on pelvimetry films. This slide rule will be made available by the Picker X-ray Corporation and will simplify and speed up the mechanical process of determining the exact size of the above-mentioned structures.

Two residents presented papers before the New York Roentgen Society. Dr. Julian Mandell's paper was entitled "Correlation of electrical activity with motor behavior of the small intestine." Dr. Pablo L. Morales discussed the effect of cortisone on the skin erythema reaction following low kilovoltage radiation. Dr. Jerome Nadelhaft, an American Cancer Society Fellow in Radiology, is assisting Dr. A. Purdy Stout in a study of salivary gland tumors.

The work of the Radiological Research Laboratory, under the direction of Dr. G. Failla, continues along the lines described in previous annual reports. The research project for the Atomic Energy Commission occupies most of the time of Professors Roberts Rugh, in biology, and Harald Rossi, in physics. A full report of the work on this project has been published by the A.E.C. as Document No. NYO-4008.

Physical problems related to the clinical use of radioactive isotopes and to the calculation of radium and X-ray dosage in the treatment of cancer are under the supervision of Dr. Edith H. Quimby. The radioisotope laboratory receives and standardizes all radioactive isotopes of iodine, phosphorus, gold, sodium and potassium, and dispenses them to clinical services and research laboratories. In their last year residents receive training in the methods of handling and standardization of radioactive isotopes under the supervision of Dr. Quimby. We are greatly indebted to Drs. Failla and Quimby and to other members of the Radiological Research Laboratory staff for their cooperation with the Radiological Service of the Presbyterian Hospital, particularly for help with the physical problems involved in the calculation of dosage in connection with the radiation treatment of cancer. Dr. Quimby was awarded the Jagadish Bose Memorial Gold Medal of the Indian Radiological Association. Her paper, delivered in absentia, was entitled "Recent Developments in Radiation Dosimetry." Drs. Failla and Quimby were delegates of the U. S. Government to the Fourth Inter-American Congress of Radiology in Mexico City.

Within the past year the Atomic Energy Commission has offered to selected institutions a "general authorization for the use of radioactive isotopes in human beings." In these institutions projects for the use of these substances are not subject to review by the Subcommittee on Isotope Distribution in Washington. Instead, the necessary review is done by a

committee appointed from the staff of the institution itself. The Columbia-Presbyterian Medical Center is one of the institutions chosen by the A.E.C. for this purpose. Dr. Failla is Chairman of our Radioisotope Committee.

A bimonthly conference with the staff of the chest service dealing with diagnostic problems related to cardiovascular surgery was initiated and is now held in the Babies Hospital Amphitheatre.

A Fairchild roll film unit for the X-ray examination of the heart and great vessels was installed. It makes X-ray exposures at the rate of two per second while radiopaque material, injected into an arm vein, flows through the heart disclosing abnormalities of congenital origin. A new room in the third floor stem immediately adjacent to the X-ray service is now being prepared for this purpose. It will be known as the "angio-cardiographic room" and will be equipped especially to do all types of X-ray examination of the vascular system as well as of the heart and great vessels. Dr. Alfred Berne is in charge of this work. Cerebral angiography, the examination of the arteries and veins of the brain, will continue to be done at the Neurological Institute under the direction of Dr. Juan M. Taveras. Important information concerning certain diseases of the brain, particularly aneurisms and brain tumors will thus be provided.

Due to the increasing number of the more complex types of examination, of which cerebral angiography is one example, the X-ray facilities in the Neurological Institute are quite inadequate. A study is now being made of the possibility of adding space and of revision of existing space with more efficient X-ray equipment to meet increased demands.

The storage of radiographs for future use is a space-consuming problem. These films may be of vital importance to a patient later on and are necessary for teaching and research purposes. The microfilm method, reproducing X-ray films on 35 mm. film which can be stored in rolls, would solve the space problem. It will be necessary in the near future to make use of the microfilm method at the Presbyterian Hospital as our storage facilities are becoming inadequate for the constantly increasing volume of films being produced.

In the summer of 1952 an application was filed for a grant from the United States Public Health Service for the purchase of a Betatron for the treatment of cancer. The Betatron is an apparatus for the production of X-rays at 24,000,000 volts and for certain experimental studies in the biological effects of high speed electrons. The purpose is to determine the place of X-rays produced by 24,000,000 volts in the general problem of the treatment of cancer. In November we were informed that the National Advisory Cancer Council had recommended, and the Surgeon General of the United States Public Health Service had approved, this grant. We are looking forward with great interest to the use of this new equipment.

Surgery

George H. Humphreys, II, M.D., *Director*

In reporting the year's work of the Surgical Service, it seems appropriate this year to review not only the activities of the year just passed but also the relationship of these activities to those of previous years. In the seven years since the termination of World War II, we have been in an almost constant state of reorganization, first of the staff in response to resignation of older members and return of many young men from military service, next of the teaching and training program, and finally of the physical facilities of the Service, in relation to those of the Hospital as a whole. The tempo of change is now slowing, and it is time to examine its direction, and to evaluate our present situation in relation to primary objectives.

Continued growth is noted year by year. Except for last year, when the building program curtailed operating room facilities, there has been a steady increase in the total number of operations each year, from 2,725 in 1930 to 4,570 in 1952 (Table I). This numerical increase has also been accompanied by a still greater increase in the magnitude and complexity of the procedures which add not only to the operating room time per case, but also to the burden of adequate care of these often critically sick patients, both before and after operation. Thus, while common operations such as appendectomy have increased slowly in numbers, others such as resections of the stomach which were uncommon and hazardous twenty years ago, have become much more frequent and safe. Still others, which were unheard of twenty years ago, and very rare and dangerous ten years ago, are each year increasing in numbers and decreasing in risk (Table II).

This increased clinical activity has been paralleled by an expansion of the house staff training program in numbers, duration and variety of experience. Whereas in 1930 there were sixteen men whose training was confined to the Surgical and Medical Services for two or three years, in 1940 there were thirty-two, and now we have forty-one men who rotate through eight ancillary services for a period up to six years. This arrangement both adds strength to the other services and breadth to the surgical program which is the more necessary as the crowded medical school curriculum relegates

technical training more and more to the graduate period. In addition to the residency training we have been able to extend our facilities to increasing numbers of postgraduate students and fellows. These men, the majority coming from foreign countries, increasingly look to this Center as one of the great training institutions of the world, and bring to us many valuable skills and contacts from abroad, which continue after their return to their native lands.

It is noteworthy, however, that while the proportion of house officers to the total number of operations has remained remarkably constant (at somewhat less than one per hundred operations) the proportion of ward to private operations has constantly declined (Table I). The total number of ward operations has remained unchanged for twenty years whereas private operations have increased from one quarter the number of ward operations in 1930-35, to a number which for the first time this year is slightly in excess of the ward. This is to be expected since the number of ward beds has not increased in that period, while the increase in low-cost private facilities, especially in response to the increasing group of insured patients, has made substantial gains. This change represents presumably a social gain, and certainly an increase in community service rendered by the Hospital, as well as an increased source of income to it which may offset current inflationary trends. We cannot expect a reversal of the trend, and, while accepting it, must make provision for it within the primary objectives of the institution.

As a teaching institution our primary objective must always be the adequate teaching and training of physicians and surgeons. Exemplary patient care is an essential part of this objective. This objective transcends state and even national lines, and must not be compromised for the sake of local community service or in response to financial pressures. Since the teaching of surgical principles to medical students continues adequate with our present ward facilities, the effect of an increasing superstructure of private operating is felt on this level only in its tendency to divert the permanent teaching staff away from their teaching function. The training of men in the technique of surgery, however, can be done only within definite limits on the private service. It is, therefore, as disturbing as it is logical to note that the increased number of men in graduate training so accurately reflects the needs of the private service, that the greater number of these men do not complete their training at this institution, and

that in fact the number completing their training each year has not increased in twenty years, although their experience and proficiency is enormously greater than it then was.

A second objective of almost equal importance to the first is the advancement of knowledge through research. Surgery as in other hospital services includes both fundamental studies in the laboratory, and the translation of knowledge so gained into clinical practice. Although in the past the former has not been a primary function of the Hospital, nevertheless in the metabolism service where patient care and research are indistinguishable, and through specific bequests such as the Mary Madison McGuire Fund for Cancer Research, considerable help is already being given. But in the latter the function of the Hospital is a vital and increasing one, since especially in surgery the application of much of our physiologic, chemical and bacteriological research depend directly on studies of patients under treatment or during operation. Thus twelve of the twenty-eight research projects described in this year's report of the Department to the University are directly related to patients under treatment, and these studies were of direct and immediate benefit to them.

Research is carried on for the most part by the permanent members of the staff, though house officers and even medical students play an important part. It follows that the productivity of the Service depends in large measure on the ability of the staff to find sufficient freedom from the demands of patient care to pursue their interests. This is best accomplished by a strong nucleus of "strict full-time" men, selected for their interest in teaching and research and willing to accept the smaller financial support of an academic salary rather than realize their full earning potential in private practice. We have been fortunate in building such a group during the past six years, but it has been increasingly difficult to maintain it, and, this year, a modification was forced upon us. It appears not to be a new situation, for in his annual report of thirty years ago Dr. Whipple wrote: "The clinician with any ability is affected by the inexorable law of supply and demand. Because of this law, if the financial return for full-time clinical work in University Medicine is so small as to be a source of worry and privation, the qualified men cannot, or will not remain in this field."

As a result of the modification which became effective in July, all members of the Service who are directly in charge of patients except the director now are supported at least in part by fees. This group of "part-

time" or "geographic full-time" men has continued to give loyal and unstinted work supervising the care of ward patients, teaching, resident training and continuing research projects. There have been no losses through resignation, retirement or death. Two men have been appointed: Dr. Philip Wiedel as Assistant and Dr. George F. Crikelair as Assistant Attending Surgeon, both on July 1 at the termination of their residencies. In addition, Dr. John Prudden was appointed Assistant Attending Surgeon on May 1 but because of unexpected change in classification it was necessary to grant him leave of absence for military service before he had begun his duties.

Late in 1951 a modification in service organization was begun which became fully effective after the first of the year when full operating room facilities became once more available with the completion of the reconstruction in Babies Hospital. The Service is now subdivided into six units. The pediatric surgical service, under Dr. Edward Donovan, is served by six attending general surgeons in rotation as well as having a limited number of beds assigned to the plastic and thoracic services. The plastic surgical service, under Dr. Jerome P. Webster, occupies two four-bed wards on the adult side, one for male and one for female patients. Unfortunately it has not been possible to expand these ward facilities as originally provided by the Planning Committee at the onset of the reconstruction program. The thoracic surgical service is a loosely organized unit without geographic assignment but occupying a specified number of beds in each of the general units. Though a senior and junior resident are assigned to this service the patients are cared for in large measure by the general surgical house staff thus avoiding segregation of this branch of surgery, knowledge of which should form an increasing part of a competent general surgeon's training. This service is under direct charge of Dr. George H. Humphreys, with six attending surgeons, who also do general surgery. The head and neck service is a combined interdepartmental unit under the leadership of Dr. Joseph J. McDonald. It occupies a limited number of beds on the otolaryngology ward, is cared for by house staff assigned to it in rotation from both general surgery and otolaryngology, and has attached to it attending surgeons from general surgery, plastic surgery, otolaryngology and oral surgery, while consultants from surgical pathology and radio-therapy regularly attend its clinic.

Finally, the main adult wards of the general surgical service have been divided into three units of two main wards each. Dr. Robert H. E. Elliott

is in charge of the east service, Dr. Lawrence W. Sloan of the center service and Dr. William Barclay Parsons of the west service. Through each of these units the house staff rotates, the interns and assistant residents for two months in each, the residents for three, and each unit has corresponding operating room assignments according to a schedule designed to minimize conflicts between ward, teaching and clinic duties and operating room activities. Although this system has reduced flexibility of operating room scheduling somewhat, the disadvantage is more than offset by permitting better planning in each man's complex combination of obligations. In particular it serves to protect the ward and teaching activities which are our primary obligations, from the increasing demands of private practice.

Not only research, but also attendance of the staff at meetings in the City, in other states, and in other countries has continued at a high level. Of particular interest are the Cancer Symposia arranged in a number of states by Dr. Cushman Haagensen, Dr. Joseph J. McDonald and other members of this and other services who are also on the staff of the Francis Delafield Hospital; the visit of Dr. Jerome P. Webster in April to the University of Bologna for the purpose of accepting an honorary degree in recognition of his achievements in plastic surgery and medical history; the meeting of the third Pan-American Convention of Gastroenterologists in Mexico City in May where Dr. William Barclay Parsons read a paper on pancreatectomy; the series of demonstrations and lectures on cardiovascular surgery given by Dr. Ralph A. Deterling and Dr. George H. Humphreys on invitation of the Surgical Society of Bogota, Colombia, in July; and the Clinical Congress of the American College of Surgeons held in New York in September at which time a number of papers were read and "cine-clinics" and moving pictures shown by members of the staff, in addition to which all of the surgical services at the Medical Center cooperated under the chairmanship of Dr. Humphreys in presenting a series of operations throughout the week on closed circuit color television through the courtesy of Smith, Kline and French Company. The helpful cooperation of the Nursing Service and of Mr. Joseph Degen of the Administrative Staff did much to make this program a success.

In looking forward it is evident that if we are to maintain our present level of activity in progressive development of improved surgical care through research and its implementation on the wards and in the operating rooms, more satisfactory means of support must be found for the attending staff. Ideally this would best be accomplished by a return to a number of

adequately salaried full-time positions. If the present basis of partial support through private earnings is to continue, better provision should be made for simplifying the conditions of practice in order to minimize attending staff time diverted from other activities. Thanks to the recent building program, the physical facilities are now excellent. What is still lacking is adequate supporting personnel, including additional professional staff, both medical and nursing, as well as ancillary workers. But if this is to be done we must, above all, never lose sight of our primary objectives.

TABLE I

	Operations		
Year	*Total No.*	*% Ward*	*House Staff*
1930	2,725*	80	16
1935	3,185*	82	24
1940	3,594*	70	32
1943	3,676*	64	18**
1948	4,320*	59	38
1951	4,105°	53	41
1952	4,570°	49	41

*Includes Fracture but not Pediatric Surgery
°Includes Pediatric Surgery but not Fracture
**Theoretical figure. Staff varied widely due to military changes.

TABLE II

	1930-35	*1936-40*	*1941-45*	*1946-50*
Appendectomy	977	1,151	1,163	1,380
Gastrectomy	0	0	456	788
Colectomy	192	267	396	488
Pneumonectomy	0	1	22	80
Esophagectomy	0	0	34	70
Repair Atresia of Esophagus	0	14	37	39
Porto-Caval Anastomosis	0	0	12	114

Urology

George F. Cahill, M.D., *Director*

There have been no resignations or losses during the year on the staff of the Urological Service.

Members of the Staff served during the year on many committees of the local and national medical societies. Dr. Ralph C. Yeaw was elected Treasurer of the New York Urological Society. Dr. John K. Lattimer has continued to serve on the National Committee for the Study of Tuberculosis in the Veterans Administration. Dr. Charles Hazzard was elected Vice-President of the New York Urological Society. Dr. John N. Robinson has continued his services as Senior Consultant in Urology to the Veterans Administration, and was made Consultant in Urology to the U. S. Military Academy at West Point. Dr. George W. Fish has been appointed Consultant in Urology to the U. S. Army by the Surgeon General of the Army. He also has been appointed as a Governor of the American College of Surgeons. Dr. George F. Cahill completed his five years of service as a member of the Special Advisory Committee to the Veterans Administration. He continued his services as Vice-President and Trustee of the American Board of Urology. He was elected President of the American Urological Association, and during the year was President of the Ninth Congress of the International Society of Urology held in New York. The Congress was the first ever held on the American continent.

Members of the Staff have presented papers, both scientific and clinical before numerous local, state, national and international societies. Dr. John K. Lattimer presented his findings of a pilot study on the use of "isoniazid" in renal tuberculosis made at the request of the Veterans Administration and the Pure Food and Drug Administration. He also reported an additional study on the treatment of genito-urinary tuberculosis with streptomycin and PAS. This was presented in the form of an exhibit at the meetings of the American Medical Association, the U. S. Government Conference on Chemotherapy of Tuberculosis, the American Urological Association at Stanford University, California, at the New

England Section of the American Urological Association, the Baltimore Urological Society, National Tuberculosis Association meeting, at the Saranac Lake Tuberculosis Society, the International College of Surgeons meeting and the International Society of Urology. He revised the teaching of urology in the School of Nursing and continued the resident teaching program. Dr. Lattimer produced a movie upon partial nephrectomy for tuberculosis and with Dr. Ralph Veenema gave a demonstration of a punch biopsy diagnosis for carcinoma of the prostate.

Dr. Harry Seneca has continued the experimental work in the biosynthesis of cortisone. He also has studied the effect of bactericidal properties of certain iodine compounds and H.S. or "di-isobutyl phenoxy ethoxy ethyl dimenthyl benzyl ammonium chloride monohydrate" upon bacteria, especially those found in genito-urinary infections. He has with Miss Diana Ides been studying the role of steroids in lowering the resistance of experimental animals to infection. He also has studied the bacterial, fungal and protozoal spectrum of Thiolutin, Rimocidin and Magnamycin. He has completed a study of the effects of the antibiotics now in use in medicine upon human spermatozoa. The effect of antibiotics has also been determined upon Trichomonas vaginalis. During the year Dr. Seneca wrote chapters in Pullen's Communicable Diseases and in Gradwohl's Clinical Tropical Medicine.

Dr. Perry B. Hudson has had the problem of carcinoma of the prostate under study, including the grouping and the incident and diagnostic criteria. He also has been determining the effect of bilateral adrenalectomy upon advanced reactivated cancer of the prostate. The enzyme activity of the prostate and the improvements of methods of study have occupied considerable activity of the year, and has been reported with various members of the staff of The Francis Delafield Hospital.

Dr. Meyer M. Melicow presented a study on the classification and pathology of bladder tumors at the New York Academy of Medicine. He also presented a paper on retroperitoneal tumors at the American Radium Society, a paper on intra-urothelial cancer, cancer in situ; and a presentation on Bowen's disease of the urinary bladder at meetings of the American Medical Association. At the American Urological Association Dr. Melicow presented a paper upon bladder neoplasms, a review of over 2,500 biopsies and specimens. During the year he presented for publication six papers upon urological pathological subjects.

Dr. George W. Fish contributed a chapter on the surgery of the bladder in M. Campbell's System of Urology. He also has joined with Drs. Hudson and Harold W. Jost in a study on the effect of massive doses of estrogens upon advanced prostatic carcinoma.

Dr. Cahill presented papers on adrenal studies and adrenal surgery at the American Association of Genito-Urinary Surgeons, The New York State Medical Association, the Puerto Rican Medical Association, the Washington Academy of Medicine and the West Central Section of the American Urological Association. He also contributed a study on hydronephrosis with multiple hilar renal vessels at the North Central Section of the American Urological Association. With Dr. J. W. Jailer several papers have been published on studies of the effect of ACTH and cortisone upon adrenogenital syndromes in children and in adults.

The installation of the newer cystoscopy tables and X-ray equipment was accomplished during the summer with some working disturbance due to the nature of the change. With the greatly increased demand for diagnostic procedures upon the service, it is not yet certain whether or not further equipment and expansion may be needed to fulfill the demand.

The Urological Service wishes to express to the number of friends who so kindly contributed to its maintenance and to its studies, its deep gratitude. Among those are, first the Trustees of the Presbyterian Hospital and the administrators. We wish to especially thank the officers of Charles Pfizer and Company for its generous donations; and for grants through the University, our old friends the late Albert D. and Mary Lasker for their generous support of many activities. We wish to thank Mr. Richard Blow and Mr. John L. Given for their contributions. The Director wishes to express his thanks to the members of the staff both professional and non-professional for their faithful services during the year.

Since the Urological Service was established in 1928 under the late Dr. J. Bentley Squier there have been 33,872 admissions and of these 23,701 were new cases. The admissions for the year total 1,771, of which 640 were admitted to Presbyterian Hospital Wards, 532 to semi-private, 306 to Harkness and 293 to Babies Hospital. During the year there were 878 consultations, 714 operations, 1,809 cystoscopies. There were 28 deaths (1.08% of admissions), and of these 14 followed operation or 1.09%. There were 5,765 X-ray examinations and 9,673 laboratory tests.

REPORTS
of
Voluntary
Organizations

The Alumnae Association School of Nursing

The year 1952 being the 60th Anniversary of the School of Nursing of The Presbyterian Hospital, the activities of the Alumnae Association were directed towards special commemorations. Under the skillful and imaginative guidance of Miss Cecile Covell, a 60th Anniversary Committee carried out various programs with the ultimate aim of making it possible for as many alumnae as could to return for Graduation. We are particularly grateful to Miss Covell and to her assistants for arranging many original and memorable events. An Alumnae Autobiographical Register is being compiled by Miss Winifred Kaltenbach and will be sent to the members of the Alumnae Association.

The Anna C. Maxwell International Fellowship Fund which was created in 1951 now totals $4,619.00. We are very glad to report that Miss Frances Beck from London was awarded the first of three one year scholarships from the fund and is now living at Maxwell Hall while studying at Columbia.

Three meetings of the Alumnae Association were held in Maxwell Hall during 1952. On February 14th a large audience enjoyed monologues presented by Miss Ruth Draper. We appreciate the generosity of Miss Draper in giving her time to the Alumnae while sustaining a busy professional schedule. In December of 1951 the late King George VI of England personally bestowed on Miss Draper the honorary membership in the Order of the British Empire with the rank of Commander.

The Alumnae again had the pleasure of entertaining the Graduating Class at a dinner at the Pierre Hotel on Monday, June 2nd. Credit for a very gay evening once more goes to Miss Eliot. Miss Covell arranged for special entertainment and favors and a large blue and white banner with the dates "1892-1952" was hung behind the speakers table to mark our anniversary year. We were delighted to have many friends of the School attend and in particular Mr. W. E. S. Griswold, Jr., who was a most entertaining toastmaster — many thanks!

The Alumnae Association School of Nursing

On June 4th, 1952 the Annual Meeting of the Alumnae Association was held in Maxwell Hall at which time the Officers of the Association and Committee Chairmen presented their reports. Two hundred eighty-eight alumnae returned for reunion lunches and the meeting, one hundred more than last year. At the opening of the meeting Miss Eliot read a letter from Mrs. Edith Joy Field, '02, presenting a beautiful lectern equipped with a microphone to the Alumnae Association for use in Sturges Auditorium. It was received with great appreciation — all felt it to be a long and much needed addition. A rising vote of tribute was given to Miss Ann Penland whose retirement from active practice after 40 years of service was announced. Miss Ruth Klawunn, President of the class of 1952 presented a handsomely inscribed Holy Bible as the class gift to the School. The Class of 1927 and their friends established a scholarship in Columbia University in honor of Miss Margaret E. Conrad, the first Professor and Associate Dean of the Department of Nursing under the affiliation between Presbyterian School of Nursing and Columbia University. Miss Helen Young read a tribute "Recollections of Anna Caroline Maxwell" written by Dr. Albert R. Lamb. He most generously presented sufficient autographed copies to be given to each member of the Graduating Class and for all students in the School. A more fitting and cherished gift cannot be imagined. Most heartfelt thanks were extended to our honorary member and great friend, Dr. Lamb.

On Thursday, November 20th, 1952 Mr. Edward J. McGoldrick, Director of Bridge House, Department of Welfare, spoke on "Present Day Treatment of Alcoholism". It was a most informative and interesting talk followed by discussion.

Thanks to the Board of Trustees and Hospital for the support and advice with the administrative details of the Alumnae Association.

The following officers were elected for the coming year:

President	Mrs. Allen M. Look
Vice President	Mrs. Frank E. Smith
Corresponding Secretary	Lillian Oring
Recording Secretary	Ruth A. Lynch
Treasurer	Helen Young
Assistant Treasurer	Margaret Wells

Alumnae Scholarships from the income of the Emma Baker Kennedy Scholarship Fund, the Helen Young Scholarship Fund, the Distributing Fund and the Richard William Walsh Scholarship amounting to $2,100.00 were awarded in 1952. The Distributing Fund received contributions of $7,676.49 in 1952.

Maria A. Look, '32
President

Board of Women Managers of The Babies Hospital

The opening of the Strong Memorial Wing for children at The Mary Harkness Convalescent Home is an important adjunct for the placement of convalescent patients.

At Babies Hospital the installation of two new modern self leveling passenger elevators takes first rank in practical benefit.

The Board helped with the decoration of the Residents' Lounge and the purchase of a television set for the use of the medical house staff. Mrs. Charles Pratt gave us a fine rug which completed the decorative scheme of the lounge.

The Recreational Therapy Department, which is sponsored by the Board, has had an active year and has brought many hours of happiness to children well enough to participate in the games and handicrafts as well as to take part in many parties.

Our Board continues interest in support of the Pediatric Psychiatric Clinic, the Cleft Palate Fund, The Christmas Doll Fund, The Emergency Nursing Fund and the Interns' Loan Fund.

This year our quota for the United Hospital Fund is $40,062. To date we have raised $33,918. Mrs. Frederic F. deRham graciously served again as Group Leader and was assisted by Mrs. Joseph V. McMullan and Mrs. Charles H. Thieriot, Jr. as Team Captains for the Board. Miss Hope Kingsley was Chairman of Box Week. We are indeed grateful to these workers for their help and cooperation.

The Visiting Committee has made monthly inspections of the Hospital.

We are most grateful to Mrs. Carll Tucker and Mrs. Charles H. Thieriot, Jr. for their very generous contributions to the Interns' Loan Fund, and to Mrs. Joseph V. McMullan, Mrs. John H. Reynolds and Mrs. Frederic F. deRham for their gifts to the Emergency Nursing Fund.

The Hospital was the fortunate recipient of four television sets on loan from The Arthur Murray Gift Committee. Mr. J. B. Henriques provided entertainment for the children on several occasions.

Christmas was again a very happy time for our children, through the generosity of our good friends. Among the donors of "Christmas" for the children were Miss Hewitt's Classes, the night staff of the Utilities Department of the Associated Hospital Service, the staff and personnel of the School of Dental and Oral Surgery, the Transportation and Treasurer's offices of the New York Telephone Company, and the Bank of Manhattan.

During the year volunteers have served at the Information Desk, and in the Recreational Therapy, Nursing and X-ray Departments.

The monthly luncheon meetings with Mr. John S. Parke, Executive Vice-President, and the representatives of the Women's Auxiliaries are of continuing interest and value.

It is with much gratitude that I extend my deepest thanks to the Board for their loyalty and cooperation, and to Dr. Rustin McIntosh, Miss Elizabeth Callahan and Miss Marjorie Peto for their constant interest and fine leadership.

Catharine P. O'Neill
President

Cribside Social Service Committee of the Babies Hospital

After a year in the pleasant new offices the Social Service Committee is happy to report that the additional privacy adds all that we hoped it would to our opportunities for readily interviewing parents and patients.

There is no great perceptible change in our statistics, but there has been a feeling of increased pressure of work, due to the great number of forms required to secure city and state financial assistance for the patients. There has also been an increased collaboration with the Medical Staff in planning for the child's total care.

Miss Marjorie Eustis, who since May has been case work supervisor of the Department, has also been contributing with Dr. Conrad Riley and Dr. William Langford, in an educational program designed for parents of children with familial autonomic dysfunction.

Miss Mildred Fine, the social worker on the premature service, has been attending a special training program for social workers in Parent Group Leadership, given by the Child Study Association. It is hoped that parents groups will be developed.

During the year 259 children were placed for convalescent and camp care. We are appreciative to be able to use the excellent new facilities of the recently opened Strong Memorial Wing of the Mary Harkness Convalescent Home.

The Department has had 16,400 office interviews and has made 355 home and school visits, in addition to 6,252 interviews with the Medical Staff and 4,644 interviews with workers of other agencies. We have been able to use profitably the services of a volunteer typist, and have participated in the training of a case aide from Adelphi College.

We held our November and May meetings at the Hospital and are most grateful to Mrs. Conrad Riley for entertaining the Committee at luncheon following the May meeting.

The Lenten Sewing Class brought in $732.16 and we regret that the Nearly New Shop receipts have decreased to $850.39, despite Mrs. Herman Hoops' great efforts.

We are pleased to announce that $1,550.00 has been allocated for the use of the children of the Cerebral Palsy Clinic. This was originally known as the Posture Clinic Fund and was established by Mrs. Sonja Weber. The Italian Welfare League has contributed $500.00 to be used for transfusions for children of the Cooley's Anemia Clinic. We are tremendously indebted to the United Hospital Fund for $6,971.87 and to the Greater New York Fund for their gift of $7,400.76. Mrs. James McC. Magie and Miss Dorothy Mills headed teams for the United Hospital Fund during the fall campaign.

The monthly luncheons at the Hospital give us all an opportunity to meet the other auxiliaries and to learn something of the functioning of the Medical Center. We feel more an integral part of the Medical Center and are grateful to Mr. John S. Parke, Executive Vice-President, for giving us so much of his time.

Edith B. Fennelly,
Chairman.

Neurological Institute Auxiliary

The Neurological Institute Auxiliary continues to focus its interest and main endeavors toward maximum service to the patients of the Institute through the Social Service Department of the Hospital. Under Miss Mercedes Geyer's sympathetic and able direction there has developed an unusual degree of mutual esteem and cooperation, which is not only deeply gratifying to the members of the Auxiliary but inspires them to renewed efforts on behalf of the work of the department toward which they feel so strong an obligation.

Despite being nearly fifty percent understaffed because of the increasing difficulty of securing qualified social workers, the Social Service Department has achieved a year of great service to patients, both inside and outside the Hospital. The program initiated at the request of the doctors for more case coverage has been systematized so that, as far as possible, each patient coming into the wards is immediately interviewed by a social worker whose report then becomes part of the record as an aid to the doctor in planning the most effective handling of the patient's whole situation. Despite being short-handed, the staff has held 12,469 interviews with 1,619 patients during the year and great credit is due each one of them for the diligence with which they have given the maximum service.

Thanks to a donation of $500, which Mrs. Edmund Twining secured from the Society for the Relief of Women and Children, our summer camp funds were greatly amplified. This was a particular boon since this year fewer families were able to assume any part of the expense of their children's camp experience. As the children we send to camps are those with seizures they require a longer-than-average stay, at greater cost than a normal child and the amount required per child is relatively higher. It is gratifying that the value of camp for this particular group of children is being accepted on an ever widening scale.

The annual donation of $150 which we receive from the Havens Fund, for which Mrs. Charles Adams serves as our almoner, was effectively allocated in the relief of three cases.

The Neurological Institute's total distribution from Everybody's Thrift Shop amounted to $7,691 for the year, an increase of 15% over last year. This represents not only a well-established financial back-log but a back-log of dedicated volunteer service to the Neurological Institute on the part of many members of the Auxiliary under Mrs. Royall G. Cannaday's able direction. The committee is proud of the fact that through her meticulous carrying out of the duties of Treasurer of Everybody's Thrift Shop, Mrs. Cannaday renders immeasurable service to the other charities in the shop. The staff of the Social Service Department, at their own suggestion, conducted a drive for rummage for the thrift shop. The committee is not only greatly indebted to the staff for their kind help, but especially for the spirit which prompted this gesture of cooperation. Last spring we participated in a fashion-show luncheon for the benefit of our thrift shop activities. Thanks to the careful planning and arrangement by Mrs. Richard Morris and Mrs. Thorneycroft Ryle, the occasion proved both pleasant and profitable.

Mrs. Bruce Brodie carries on as our representative on the Milbank Library Committee in charge of the library service to the Neurological Institute. Through her efforts not only has the circulation of books, magazines and pictures increased materially this year, but numerous donations of books and magazines have been made to the library by members of the Auxiliary.

Mrs. Willis Wood is invaluable in behalf of the Neurological as a member of the House Committee of the Medical Center and is ever alert and responsive to the Hospital's needs.

We had two teams, totalling twenty-three members, working on the United Hospital Fund campaign this year. We have raised to date $18,186 or 82% of our quota as compared to 74% of our quota last year. Mrs. Stuart Preston again acted as our chairman for Box Week and was tireless in her efforts in enlisting the generous assistance of many of the team members in carrying out our assignment.

The Auxiliary helped with the tea held in Maxwell Hall for members of the staffs of welfare agencies working with the Social Service departments of the Medical Center. We feel that this is an occasion which might well be repeated annually, not only because it was in itself felicitous but also because there have been so many expressions of appreciation from the guests of how much it meant to them to meet personally so many of the staff of the Center with whom they had previously had only indirect communication.

We are proud that five members, or one-sixth of our committee, Mrs. Royall G. Cannaday, Mrs. Edward Farley, Mrs. Frederick Tilney, Mrs. Reginald Wigham and Mrs. Willis Wood, qualified for the Twenty-five Year Club. We are happy that Mrs. Tilney received her announcement and, as always, had expressed her devotion to the work of the Neurological Institute just before her death, which we record with a great sense of loss and affection.

We welcome the following new members of the Auxiliary: Mrs. William Shippen Davis, Mrs. Henry S. Fenimore Cooper and Mrs. Phyllis Adams Kirkland, and hope that their interest in our work will be as rewarding to them as will their wisdom and help to the Hospital. The Auxiliary is grateful to the Social Service staff for their cooperation which makes possible the efforts of the Auxiliary on behalf of the Neurological Institute.

Helen Hoyt Stookey
Chairman

The Women's Auxiliary of the New York Orthopaedic Hospital

The new acivities for the orthopedic patients started last year have proven themselves. Movies have been provided for it is found that they satisfy a need not covered by television. Not that television is unappreciated! We have been wanting a set in each of the larger wards and were delighted to reach this goal when sets for the wards were generously donated for loan by Mr. Arthur Murray.

The idea of having a recreational therapist with the babies during the summer months proved a great assistance and has grown into a year-round job. More volunteers will be needed as this program for play develops and the solarium becomes a center for recreational activities. We are indebted to the Hospital for its decorations and we hope that next year we can add to the equipment and the atmosphere of this area.

To keep us up to date on Social Service, Miss Helen Irwin has come to several of our meetings and made most interesting reports on those patients who are old acquaintances and those newer ones of especial interest. The same desire to know our Hospital from various angles prompts us to keep in contact with Mrs. Helen White of Occupational Therapy and to schedule Visiting Committee meetings. Dr. Alan De Forest Smith conducted the Committee through the Orthopedic Wards.

Chrismas stockings for the children were filled again, and gifts of books and magazines, records, toys and clothing were received from several of our members.

We have two teams for the 1952 United Hospital Fund Campaign. Mrs. Edward Gerry is group leader, Mrs. William Kirkland Team Chairman, and Mrs. Harry Fowler Chairman for Box Week. To them and all our workers we are deeply grateful.

It is with regret that we report the death of Mrs. Percy Pyne, one of the earliest members of our Board, and a most beloved and life-long friend of the Hospital.

Mrs. William Taylor has resigned, but has been elected an honorary member of the Auxiliary. She has been a valiant worker on one of the United Hospital Fund Teams.

We are delighted to have Mrs. Robert Carroll as a new member. We wish to thank Mrs. Charles Van Pelt for her work as secretary and to announce that Mrs. Prentice Talmage, Jr. has accepted this office.

Frances Reese,
Chairman.

The Women's Auxiliary of The Presbyterian Hospital

The Departments and Services through which we serve the Hospital and its patients have had a successful year. The Library and its facilities were used by 25% more patients with a 10% increase in circulation. On the five days preceding Christmas we broadcast recordings made by well known stars of the screen on the new Hospital Broadcasting Station. The Social Service Department of which Miss Mercedes Geyer has been made Director handled 6,752 patients although handicapped by a shortage of staff. The Occupational Therapy Department has been reduced to six full-time and one part-time trained therapists and limits its treatments to those patients for whom it is functionally or medically necessary. A program for diversional therapy using volunteers was started.

The Volunteer Department has had a 39% increase over 1951 in hours of service given throughout the Hospital by 522 volunteers under three successive Directors, Mrs. Arlene Adsit, now an Administrative Assistant, Mrs. George Perera, Chairman of the Auxiliary's Volunteer Committee and Miss Laura Vossler who became Director in mid-summer.

Sixty-one per cent of our budget was used in the Occupational Therapy Department, 25% by the Volunteer Department and 14% by the Library. The success of two committees made it possible to support these services. The United Hospital Campaign team raised 95% of its quota which has made us one of the most successful groups in the city. The Thrift Shop Committee has again been responsible for raising a sum sufficient to make it possible for us to give additional contributions and to have a balance of $7,175.84.

Constance Bailey
Chairman

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DOROTHY H. ANDERSEN, M.D.

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D. BARTON STEVENS, M.D.
EARL S. TAYLOR, M.D.
PHILIP D. WIEDEL, M.D.
ALFRED D. YOUNG, M.D.

Attending Surgical Pathologists

VIRGINIA K. FRANTZ, M.D.
RAFFAELE LATTES, M.D.

Assistant Attending
Surgical Pathologist

JOHN W. PICKREN, M.D.

*Leave of Absence

Residents

J. WALLACE BLUNT, JR., M.D.
McLEMORE BOUCHELLE, M.D.
FREDERIC P. HERTER, M.D.
ALFRED JARETZKI, III, M.D.
WILLIAM G. LARSEN, M.D.
HENRY C. REUSCH, M.D.
ALFRED J. STOJOWSKI, M.D.
LESTER L. VARGAS, M.D.
HERBERT VOLK, M.D.
EDMUND W. VON HASSELN, M.D.

Assistant Residents

HECTOR BARISONE, M.D.
RUFUS K. BROADAWAY, M.D.
LUIS E. CASTRO, M.D.
CARL R. FEIND, M.D.
HUGH F. FITZPATRICK, M.D.
GLENDON C. FRASER, M.D.
ROBERT W. HOLLIDAY, M.D.
JAMES S. JOHNSTON, M.D.
SHELDON M. LEVIN, M.D.
MARTHA MacGUFFIE, M.D.
ORVILLE J. MIREHOUSE, M.D.
LIVINGSTON PARSONS, JR., M.D.
*SAMUEL R. POWERS, JR., M.D.
ROBIN M. RANKOW, M.D.
ALFREDO B. REHBEIN, M.D.
JAMES B. RODGERS, M.D.
DANIEL M. SHAPIRO, M.D.
EDGAR A. STORLI, M.D.
ARTHUR B. VOORHEES, JR., M.D.
JAMES M. WATSON, M.D.
JOHN M. WILSON, JR., M.D.
WHITNEY WOODRUFF, M.D.

Interns

GEORGE W. ALLEN, M.D.
HOWARD T. BARKLEY, M.D.
V. ELIZABETH COFFIN, M.D.
EDWARD DUNN, M.D.
YALE A. GEROL, M.D.
PAUL GERST, M.D.
MARVIN L. GORDON, M.D.
DON O. GORE, M.D.
CADVAN O. GRIFFITHS, JR., M.D.
JULIUS JACOBSON, M.D.
ROSAMOND KANE, M.D.
HENRY LOURIA, M.D.
ALFRED M. MARKOWITZ, M.D.
JOHN A. MEYER, M.D.
ROBERT SHAW, M.D.
LUCIANO deC. SILVA, M.D.
ANTHONY J. SMITH, M.D.
FRANCIS C. SYMONDS, JR., M.D.
W. DUANE TODD, M.D.
DOUGLAS G. TOMPKINS, M.D.
ROBERT WILDER, M.D.
MOHAMED N. ZUHDI, M.D.

Resident
Thoracic Surgery

FORREST C. EGGLESTON, M.D.

Residents
Plastic Surgery

COLETTE PERRAS, M.D.
REUVEN K. SNYDERMAN, M.D.

Assistant Residents
Plastic Surgery

CLAUDE C. COLEMAN, JR., M.D.
BLAIR O. ROGERS, M.D.

Residents
Surgical Pathology

BRADLEY BIGELOW, M.D.
ROGER J. GAREAU, M.D.
NATHAN LANE, M.D.
HUGH F. LUDDECKE, M.D.
LAWRENCE P. SHEA, M.D.

Clinical Fellows

SHIVAJI B. BHONSLAY, M.D.
EDMUND J. CAIRNCROSS, M.D.
DAVID M. C. JU, M.D.
VANCE LUCAS, M.D.
ITARU OHARA, M.D.
HARRY S. SOROFF, M.D.

UROLOGY
(J. Bentley Squier Urological Clinic)

Director of Service

GEORGE F. CAHILL, M.D.

Attending Urologist

GEORGE W. FISH, M.D.

Assistant Attending Urologists

CHARLES T. HAZZARD, M.D.
JOHN N. ROBINSON, M.D.

Assistant Urologists

LEONARD A. HALLOCK, M.D.
PERRY B. HUDSON, M.D.
JOHN K. LATTIMER, M.D.
MEYER M. MELICOW, M.D.
REGINALD F. SEIDEL, M.D.
THOMAS J. SULLIVAN, M.D.
RALPH C. YEAW, M.D.

Assistant Urologists
Vanderbilt Clinic

FREDERICK S. DICK, M.D.
STANFORD PULRANG, M.D.
ARTHUR T. WILLETTS, M.D.

*Leave of absence

Residents

Stanley B. Braham, M.D.
Noble S. R. Maluf, M.D.
Ralph J. Veenema, M.D.

Assistant Residents

J. Timothy Donovan, M.D.
Edward T. Rafferty, M.D.
Leonard J. Sullivan, M.D.
Jack M. Waldrep, M.D.

VANDERBILT CLINIC

CHIEFS OF CLINICS

J. Lowry Miller, M.D., *Dermatology*
A. Richard Lamb, Jr., M.D., *Medicine (Group Clinic)*
Herman Schwartz, M.D., *Nerve Block*
Joseph Ransohoff, M.D., *Neurological Surgery*
Daniel Sciarra, M.D., *Neurology*
Charles L. Buxton, M.D., *Obstetrics and Gynecology*
Maynard C. Wheeler, M.D., *Ophthalmology*
Halford Hallock, M.D., *Orthopedic Surgery*
Edwin B. Bilchick, M.D., *Otolaryngology*
Paul A. di Sant'Agnese, M.D., *Pediatrics*
Morton Hoberman, M.D., *Physical Medicine and Rehabilitation*
Robert B. McGraw, M.D., *Psychiatry*
Thomas V. Santulli, M.D., *Surgery*
Charles T. Hazzard, M.D., *Urology*

APPENDIX

APPENDIX

Statistics

BED COMPLEMENT, DECEMBER 31, 1952

	No. Beds	
PRIVATE:		
Presbyterian Hospital	218	
Babies Hospital	9	
Eye Institute	19	
Neurological Institute	48	
Sloane Hospital	34	
Total Private		328
SEMI-PRIVATE:		
Presbyterian Hospital and Sloane Hospital:		
All Services	65	
Medicine	16	
Surgery	14	
Urology	31	
Orthopedic	28	
Ear, Nose and Throat	9	
Gynecology	13	
Obstetrics	29	
Babies Hospital	30	
Eye Institute	28	
Neurological Institute	39	
Total Semi-Private		302
WARD:		
Presbyterian Hospital and Sloane Hospital:		
Medicine	116	
Surgery	114	
Urology	36	
Orthopedic	95	
Ear, Nose and Throat	24	
Admitting	14	
Gynecology	35	
Obstetrics	81	
Babies Hospital (including premature nursery of 23 incubators)	152	
Eye Institute	45	
Neurological Institute	124	
Total Ward		836
		1,466
MARY HARKNESS CONVALESCENT HOME		57
		1,523
NEWBORNS (Sloane Hospital)		130
Total		1,653

HOSPITAL ADMISSIONS

	Admissions 1952	1951
PRIVATE:		
Presbyterian Hospital	5,469	4,601
Babies Hospital	405	386
Eye Institute	458	466
Neurological Institute	890	875
Sloane Hospital	888	1,393
Total Private	8,110	7,721
SEMI-PRIVATE:		
Presbyterian Hospital and Sloane Hospital:		
All Services	2,171	1,157
Medicine	221	265
Surgery	278	199
Urology	532	493
Orthopedic	489	401
Ear, Nose and Throat	686	682
Gynecology	508	113
Obstetrics	1,072	902
Babies Hospital	1,240	1,089
Eye Institute	967	909
Neurological Institute	833	691
Total Semi-Private	8,997	6,901
WARD:		
Presbyterian Hospital and Sloane Hospital:		
Medicine	1,696	1,761
Surgery	1,683	1,655
Urology	640	585
Orthopedic	1,256	1,179
Ear, Nose and Throat	882	935
Admitting	1,654	1,641
Gynecology	892	924
Obstetrics	3,211	3,176
Babies Hospital	2,606	2,587
Eye Institute	1,141	1,111
Neurological Institute	1,816	1,823
Total Ward	17,477	17,377
MARY HARKNESS CONVALESCENT HOME	567	637
Total	35,151	32,636
INFANTS BORN IN SLOANE HOSPITAL:		
Private beds	572	658
Semi-private and ward beds	3,065	2,837
Total	3,637	3,495

HOSPITAL OCCUPANCY

	Patient Days Care		Percentage of Occupancy	
	1952	1951	1952	1951
PRIVATE:				
Presbyterian Hospital	62,895	61,725	78.8	81.4
Babies Hospital	1,737	1,923	52.7	55.2
Eye Institute	5,145	5,285	74.0	76.2
Neurological Institute	12,713	14,138	72.4	80.7
Sloane Hospital	7,488	8,944	60.2	69.4
Total Private	89,978	92,015	75.0	78.9
SEMI-PRIVATE:				
Presbyterian Hospital and Sloane Hospital:				
All Services	21,236	9,411	89.3	87.2
Medicine	5,444	5,274	93.0	90.3
Surgery	4,459	4,602	87.0	90.1
Urology	5,988	5,503	52.8	48.6
Orthopedic	7,335	6,889	71.6	66.9
Ear, Nose and Throat	2,835	2,637	86.1	60.7
Gynecology	4,926	1,097	103.5	82.2
Obstetrics	8,120	6,846	76.5	57.3
Babies Hospital	8,303	7,280	75.6	68.1
Eye Institute	7,630	7,420	74.5	61.2
Neurological Institute	13,314	12,332	93.3	87.8
Total Semi-Private	89,590	69,291	81.1	70.8
WARD:				
Presbyterian Hospital and Sloane Hospital:				
Medicine	39,368	36,990	92.7	87.4
Surgery	35,126	35,401	84.2	85.1
Urology	12,463	11,171	94.6	85.0
Orthopedic	29,751	32,272	85.6	93.8
Ear, Nose and Throat	4,915	5,930	56.0	74.2
Admitting	3,127	3,026	61.0	59.2
Gynecology	12,047	12,162	94.0	95.2
Obstetrics	24,673	24,531	83.2	88.7
Babies Hospital	40,703	40,069	72.8	73.0
Eye Institute	11,360	11,392	69.0	78.5
Neurological Institute	37,319	37,017	82.8	82.5
Total Ward	250,852	249,961	82.0	83.5
MARY HARKNESS CONVALESCENT HOME	9,787	10,365	51.2	56.8
Total	440,207	421,632	79.2	79.2
INFANTS BORN IN SLOANE HOSPITAL:				
Private beds	4,729	5,897	32.3	40.4
Semi-private and ward beds	23,546	21,339	71.5	65.0
Total	28,275	27,236	59.4	57.4

OUT-PATIENT DEPARTMENT STATISTICS

	1952	*1951*
Summary of Patients Treated:		
Number of patients treated	46,393	42,922
Number of visits:		
Free	101,792	102,519
Pay	284,484	277,926
Total	386,276	380,445
Average visits per working day	1,407	1,388

	New to Clinics	*Revisits*	*Total Visits*
Attendance Statistics:			
Dermatology	8,285	30,296	38,581
Emergency and Admitting Wards	16,513	934	17,447
Group Clinic	4,320	17,398	21,718
Medicine	13,753	33,689	47,442
Neurology	1,958	13,740	15,698
Obstetrics and Gynecology	5,221	35,484	40,705
Occupational Therapy	105	878	983
Ophthalmology	4,753	23,135	27,888
Orthopedic	6,350	32,408	38,758
Otolaryngology	3,411	15,009	18,420
Pediatrics	6,784	38,555	45,339
Physical Therapy	1,694	15,959	17,653
Psychiatry	251	5,588	5,839
Surgery	12,195	28,391	40,586
Urology	1,386	7,833	9,219
Total	86,979	299,297	386,276

PERSONNEL STATISTICS

	On Duty December 31	
	1952	*1951*
Administration	10	13
Assistant Secretary-Treasurer	232	228
Comptroller's Office	89	86
Convalescent Home	33	23
Food Service	368	373
Non-Professional Services	584	604
Personnel and Protective Services	64	62
Professional Services:		
Nursing	1,105	1,029
Other	910	925
Public Interest	10	9
Total	3,405	3,352
Student Nurses and Student Dietitians	482	472
Volunteer Workers	249	202

THE ALUMNAE ASSOCIATION OF THE SCHOOL OF NURSING OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK, INC.

BALANCE SHEET, DECEMBER 31, 1952 AND 1951

ASSETS

	1952	*1951*
Capital Funds—securities and cash	$491,499.39	$484,054.97
Operating Funds—securities, cash, etc.	17,818.45	13,202.80
Total Assets	$509,317.84	$497,257.77

LIABILITIES

Capital Fund Reserves:		
General fund	$ 15,497.38	$ 15,492.56
Benefit fund	128,749.39	126,510.00
Pension fund	305,966.73	303,372.27
Emma B. Kennedy Scholarship fund	22,187.91	22,181.00
Memorial Scholarship fund, '20	2,170.20	2,169.52
Helen Young Scholarship fund	16,427.78	14,329.62
Richard William Walsh Scholarship fund	500.00	
Total capital fund reserves	$491,499.39	$484,054.97
Operating Fund Reserves	$ 17,818.45	$ 13,202.80
Total Liabilities	$509,317.84	$497,257.77

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS

	1952	*1951*
Cash on hand January 1	$ 4,537.19	$ 6,780.01
Receipts:		
Sale of securities	$ 17,513.22	$ 11,059.79
Investment income	22,526.64	21,700.94
Royalties and proceeds from sale of books	1,145.49	1,447.51
Donations	8,350.53	8,949.01
Dues and initiation fees	8,470.88	8,940.88
Dinner to graduating class	550.00	730.38
Loans repaid, etc.	409.40	104.75
Total Receipts	$ 58,966.16	$ 52,933.26
	$ 63,503.35	$ 59,713.27
Disbursements:		
Purchase of securities	$ 27,025.40	$ 28,772.34
Clerical expense and fees	1,802.00	1,537.50
Pensions and benefits paid	13,745.00	13,560.00
Scholarships granted	3,233.33	2,050.00
Loans granted	200.00	200.00
Donations		425.00
Printing, stationery and postage	6,487.02	5,390.52
Entertainment of graduating class	2,120.79	2,386.87
Miscellaneous	1,855.66	853.85
Total Disbursements	$ 56,469.20	$ 55,176.08
Cash on hand December 31	$ 7,034.15	$ 4,537.19

Helen Young,
Treasurer

BABIES HOSPITAL BOARD OF WOMEN MANAGERS

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1952 AND 1951

	1952	*1951*
Balance, January 1	$ 187.44	$ 134.80
Receipts:		
Membership dues	$ 250.00	$ 230.00
United Hospital Fund	4,970.05	6,333.89
Greater New York Fund	5,275.79	4,672.05
Donations		20.00
Total Receipts	$10,495.84	$11,255.94
	$10,683.28	$11,390.74
Disbursements:		
To Babies Hospital for:		
Emergency Nursing	$ 3,500.00	$ 3,500.00
Pediatric Psychiatric Clinic	1,500.00	1,500.00
Recreational Therapy	4,500.00	4,500.00
Fund for Cleft Palate Cases	1,000.00	1,000.00
Decorations, furniture and equipment	1,502.00	675.00
Miscellaneous	13.80	28.30
Total Disbursements	$12,015.80	$11,203.30
Balance, December 31	*$ 1,332.52**	$ 187.44

JULIA M. THIEROT,
Treasurer

* Overexpended

BABIES HOSPITAL

CRIBSIDE SOCIAL SERVICE COMMITTEE

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1952 AND 1951

	1952	*1951*
Balance, January 1	$ 1,419.51	$ 1,698.83
Receipts:		
Membership dues	$ 135.00	$ 245.00
Donations	160.00	15.00
United Hospital Fund	6,971.87	8,870.48
Greater New York Fund	7,400.76	6,543.11
Investment income	589.13	609.35
Nearly New Shop	850.39	1,644.14
Sewing Class dues and receipts	638.58	411.35
Repayments by patients of advances and loans	1,520.27	1,760.63
Total Receipts	$18,266.00	$20,099.06
	$19,685.51	$21,797.89
Disbursements:		
Social service salaries	$13,935.32	$14,813.81
Travel of social service staff	103.21	136.25
Conference expenses, dues, subscriptions and meetings	273.91	266.67
Convalescent care	1,394.73	1,322.46
Advances to patients for convalescent care and miscellaneous loans	1,520.27	1,760.63
Relief assistance and extra for patients:		
Clothing	755.15	749.94
Milk and food	622.86	696.25
Christmas and Thanksgiving	329.48	306.38
Other	107.10	198.36
Miscellaneous	153.16	127.63
Total Disbursements	$19,195.19	$20,378.38
Balance, December 31	$ 490.32	$ 1,419.51

DOROTHY MILLS,
Treasurer

THE NEUROLOGICAL INSTITUTE AUXILIARY OF THE BOARD OF TRUSTEES OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1952 AND 1951

	1952	*1951*
Balance, January 1	$ 638.30	$ *285.65**
Receipts:		
Donations	$ 1,707.00	$ 1,790.50
United Hospital Fund	10,733.91	13,641.76
Greater New York Fund	11,394.25	10,062.53
Everybody's Thrift Shop	7,641.46	6,729.71
Repayments by patients of advances and loans	952.20	1,144.50
Total Receipts	$32,428.82	$33,369.00
	$33,067.12	$33,083.35
Disbursements:		
Social service salaries	$17,940.96	$25,584.65
To Neurological Institute for Library	100.00	100.00
Advances to patients for summer therapeutic care and miscellaneous	952.20	1,144.50
Summer therapeutic care	1,333.16	1,016.60
Chronic care	606.00	1,995.60
Convalescent care		10.00
Medical relief	790.81	1,321.04
Recreation of patients	48.15	47.99
Staff travel, field and conference	273.49	478.43
Miscellaneous, postage, telephone and publications	688.77	746.24
Total Disbursements	$22,733.54	$32,445.05
Balance, December 31	$10,333.58	$ 638.30

HELEN HOYT STOOKEY,
Chairman

* Overexpended

WOMEN'S AUXILIARY OF THE BOARD OF TRUSTEES OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1952 AND 1951

	1952	*1951*
Balance, January 1	$ 4,572.43	$ None
Receipts:		
Membership dues	$ 567.50	$ 455.00
United Hospital Fund	6,764.78	8,573.21
Greater New York Fund	7,180.95	6,323.83
Donations	1,125.45	115.00
Everybody's Thrift Shop	5,952.03	7,654.32
Fashion show	884.40	
Total Receipts	$22,475.11	$23,121.36
	$27,047.54	$23,121.36
Disbursements:		
To Presbyterian Hospital for:		
Occupational Therapy	$12,000.00	$12,000.00
Library	2,700.00	2,400.00
Volunteer Service	5,000.00	4,024.19
Miscellaneous	171.70	124.74
Total Disbursements	$19,871.70	$18,548.93
Balance, December 31	$ 7,175.84	$ 4,572.43

AUDREY B. SCHULLINGER,
Treasurer

Endowed Beds

(1) A gift of $10,000 shall entitle the donor to nominate a patient to use and occupy one bed in the common wards of the Hospital free of charge (except for special service) for not more than ninety days in any one year.

The donor may at the time of making the gift appoint to another in his stead such right to nominate, provided the appointee is acceptable to the Hospital.

Such right to nominate may be exercised only:—

(*a*) During the life of the person having the right to nominate, if such right is in an individual.

(*b*) For a period of fifteen years, if such right is in a Corporation, Society or Association.

(2) Endowed Bed privileges are subject to all rules and regulations governing the admission, treatment, and discharge of patients.

(3) The Board of Trustees may in their discretion under special circumstances accept gifts for the endowment of beds on such other terms and conditions as they may deem best calculated to promote the objects for which the Hospital was established and is maintained.

Memorial Endowed Beds for Research Purposes

A gift of $10,000 shall entitle the donor to establish as a permanent memorial one memorial endowed bed for research purposes in a ward of the Hospital to be used and occupied by patients free of charge, except for special service.

ENDOWED BEDS AND ROOMS

Presbyterian Hospital

1868 Mary J. Gelston
1870 Henrietta A. Lenox (2 Beds)
Washington R. Vermilyea
A. R. Wetmore
1871 John Laurie
Mary Ann Parish
1872 William Earl Dodge
John T. Johnston
Otis D. Swan
Henry Young (2 Beds)
1873 James Brown (2 Beds)
John R. Ford
Jonathan Sturges
1878 James G. and Henry G. deForest, in memory of Lockwood deForest Woodruff, M.D.

1880 William C. Rhinelander
1881 Jennet L. and Robert L. Belknap, in memory of Aaron B. Belknap
Fifth Avenue Presbyterian Church
Henry B. Hyde, in memory of his son, Henry B. Hyde, Jr.
John Stewart Kennedy
Frederick and Henry G. Marquand
Edwin D. Morgan (3 Beds)
Mary L. Sheafe
John L. Proudfit
1882 Heber R. Bishop (3 Beds)
Mrs. Robert L. Stuart, in memory of her father, Robert McCrea
Edwin D. Morgan
Mrs. Moses Taylor
1883 Frederick Billings
Reformed Protestant Dutch Church of the City of New York
1884 Nathaniel W. Conkling
West Presbyterian Church, to be known as "Faith Presbyterian Church Bed"
Madison Square Presbyterian Church, in memory of George W. Lane
1885 Brick Presbyterian Church, in memory of Dr. John G. Adams
Richard Irvin
1886 Frederick Baker, in memory of Sarah Pyewell Baker
Edward L. Beadle
Brick Presbyterian Church, in memory of Miss Ann Adams
Peter Cumming, in memory of Francis P. Schoals
George E. Dodge
Horace F. Hutchinson, in memory of Ellen B. Schoals
Mr. and Mrs. William D. Sloane, in memory of their son, William D. Sloane, Jr.
Henry S. Wilson, in memory of his son, Harry H. Wilson
1887 Fifth Avenue Presbyterian Church
1888 Broadway Tabernacle Society
Samuel Inslee, in memory of Kate J. Inslee
1889 John Sloane, in memory of his mother, Euphemia Sloane
1890 Isaac V. Brokaw, in memory of Ernest B. Brokaw
Sidney Dillon, in memory of Hannah Dillon
Ambrose K. Ely
Josiah M. Fiske
O. B. Jennings
Mrs. John Stewart Kennedy
Amelia Kerr
Robert Marshall
Elizabeth S. and Emily M. Wheeler, in memory of James Boorman
"The Davenport Bed"
1891 Sarah A. Havemeyer, in memory of her son, Hector C. Havemeyer
Thomas Hope
John E. Parsons, in memory of his children, E. L. P., K. M. P., and R. M. P.
Mrs. A. R. Van Nest, in memory of her husband, Abram R. Van Nest
1892 John Stewart Kennedy, in memory of his niece, Emma Stewart Baker
Alexander Maitland, in memory of his mother, Mary C. Maitland
1893 Maria S. Auchincloss, in memory of her husband, Edgar S. Auchincloss
Frances T. Lord, in memory of her husband, George deForest Lord
Presbyterian Church on University Place
Presbyterian Home for Aged Women
Margaret A. Sinclair, in memory of Mr. and Mrs. James Sinclair
West-Park Presbyterian Church
Young Men's Christian Association
1895 Mary Harrison
Mrs. Clarence M. Hyde, in memory of her mother, Rebecca Babbitt
John Stewart Kennedy, in memory of Mrs. Robert L. Stewart
Mrs. James T. Murray, in memory of her husband, James T. Murray

1896 Anthony Dey, in memory of Joseph G. and Eliza D. Scott
Jane Hope
Esther J. Jennings, in memory of her husband, Oliver B. Jennings
1897 Mrs. Francis E. Baker, in memory of her father, James Rich Steers
William S. Brown
Helen Miller Gould, in memory of her parents, Mr. and Mrs. Jay Gould
Margarette E. and Susan D. Griffith, in memory of their father, Griffith W. Griffith
Mary J. Griffith, in memory of her husband, Griffith W. Griffith
Rachel L. Kennedy, in memory of her mother, Mrs. Rachel C. Kennedy
Annie S. Paton, in memory of her husband, William Paton
Charlotte H. Skidmore, to be known as "The William L. Skidmore Bed"
1898 Brick Presbyterian Church
Matilda A. Brown, in memory of her son, H. Auchincloss Brown
First Presbyterian Church
Mrs. Stephen V. Harkness, in memory of her daughter, Florence Harkness
Jane Hope, in memory of her mother, Grace Corrie Hope
John Stewart Kennedy, in memory of Rev. William G. Schauffler, D.D., L.L.D.
Mrs. Elliott F. Shepard, in memory of her daughter, Florence Vanderbilt Shepard
Mrs. Elliott F. Shepard, in memory of her daughter, Marguerite Shepard
1899 William W. Cole, in memory of his mother, Mary A. Cole
William Whitewright, in memory of his father, William Whitewright, "The Whitewright Beds" (10 Beds)
1900 Emily B. Hopkins, in memory of her husband, Moses Hopkins, "Moses Hopkins Memorial"
Donald MacKay, in memory of his children, Edith Winslow and Walter Wise MacKay
Caroline L. Macy, in memory of her daughter, Mary M. K. Willets
Laura Roome, in memory of her sons, Harry and Alfred Roome
Martha L. St. John, in memory of her mother, Sarah Ward
Nathaniel Whitman
1901 Julia Billings, in memory of her husband, Frederick Billings
Camilla L. Edwards, in memory of her husband, Walter Edwards
Andrew J. Garvey, in memory of his mother, Elizabeth Jeffries Garvey (2 beds)
George Lauder
Charles H. Marshall
Justine Adele Stafford, in memory of her father, Justin A. Bliss
1902 Robert Graham Dun
Margaret J. Plant, in memory of her brother, Simon Loughman
1903 Heber R. Bishop
Lura Currier
Mrs. Francis B. Harrison
Julia J. MacCartee, in memory of her husband, Robert MacCartee
Madison Avenue Reformed Church
Adela Berry Sloane, in memory of her father, Abraham J. Berry, M.D.
Justine Adele Stafford, in memory of her mother, Eveline C. Bliss
John T. Terry
1904 Virginia E. Fowler, in memory of Clarence E. Fowler
Susan Bevier
Mrs. William Starr Miller
Josephine Penfold, in memory of Dr. Edward Livingston Trudeau, Jr.
Peter Reid, in memory of his wife, Jane Watson Reid
Francis A. Palmer
1905 Frederick G. Bourne
Helen C. Inslee, in memory of her husband, Samuel Inslee
Titus B. Meigs, in memory of his son, Titus B. Meigs, Jr.
Mrs. James T. Murray, in memory of Rev. John Hall, D.D., L.L.D.
Sarah J. Parsons, in memory of her husband, Charles Parsons
Presbyterian Church on University Place

1906 Maria L. Campbell, in memory of Henry Pearsall Campbell
Susan W. Duncan, in memory of her husband, John P. Duncan
Samuel Keyser (3 beds)
Sara Pyle McAlpin and James Tolman Pyle, in memory of their father, William Scott Pyle
Reformed Protestant Dutch Church of Garden Street
John Sloane, in memory of his brother, Thomas Chalmers Sloane
John Sloane, in memory of his father, William Sloane
1908 William R. Craig, in memory of his sister, Florence Faxon Craig
George B. Goldschmidt, in memory of his mother, Celestine Goldschmidt
Samuel Anthony Goldschmidt, in memory of his mother, Celestine Goldschmidt
Mrs. Stephen V. Harkness, in memory of her husband, Stephen V. Harkness
Charles H. Marshall, Jr.
1909 Rev. and Mrs. Robert Russell Booth, in memory of "Minnie and Willie"
Canadian Society of New York
Edward West Currier, in memory of his stepmother, Laura Currier
Edward West Currier, in memory of his stepbrother, Walter B. Currier
Edward West Currier, in memory of Edward W. Currier
Mary Jane Johnson, in memory of her husband, William H. Johnson
J. Theresa Keyser, in memory of her husband, Samuel Keyser
Julia Hannon Lyle
Winfield Tucker, in memory of Joseph, Isabelle and Adeline (3 beds)
J. Spencer Turner, in memory of his first wife, Cornelia J. Turner
1910 Jane A. Townsend, in memory of her son, Randolph W. Townsend, Jr.
Jane A. Townsend, in memory of her son, Harmon W. Norton
Jane A. Townsend, in memory of her daughter, Emma L. Norton
Amelia Mott Graham, in memory of Malcolm Graham
Adeline Ives Latham, in memory of her husband, John Howard Latham
Josephine G. Lord, in memory of her husband, Franklin B. Lord
1911 Brearley School Girls and others interested, in memory of Madam Bertha Beck, "Madam Beck Memorial Teacher's Bed"
Harriet Coles, in memory of her sisters, Susan and Anna Codman
Caroline Thorn Kissel, in memory of her husband, Gustav Edward Kissel
Katherine Spencer Leavitt, in memory of her husband, Rev. William Leavitt (2 beds)
Reformed Low Dutch Church of Harlem
Frederick Sturges, in memory of his father, Jonathan Sturges
William Stuart Tod, in memory of his brother, George Tod
1912 Melville de Wolf, in Children's Ward, "Emma de Wolf Bed"
Gustavia A. Senff, in memory of her husband, Charles A. Senff
1913 Mrs. Christopher M. Bell, "The Dennistoun Bed"
Cornelia Eaton, to be known as "The Dr. Reuben S. Carpentier Memorial" (3 beds)
Mrs. Jeremiah V. Meserole, in memory of her son, Abraham Meserole
Josephine Penfold
Jane G. Phelps, in memory of her husband, Anson G. Phelps, Jr. (2 beds)
1914 Hugh D. Auchincloss, in memory of his mother, Elizabeth Auchincloss
Jane Elizabeth Grannis, in memory of her mother, "Charlotte Williams Platt Bed"
William H. Penfold, in memory of Josephine Penfold
Louise Tillinghast, in memory of her sister, Amelia C. Babcock
Minnie Hackett Trowbridge (6 beds)
1915 A Friend, in memory of Sophia Kellogg Stebbins and Mary Tompkins Kimball
A Friend
Mrs. Jeremiah V. Meserole, in memory of her father-in-law, Abraham Meserole
Mrs. Jeremiah V. Meserole, in memory of her husband, Jeremiah Vanderbilt Meserole
Mrs. Jeremiah V. Meserole, in memory of her brother, Adolphus Clock
Mrs. Jeremiah V. Meserole, in memory of her parents, Alfred and Anna Maria Clock

1916 Emil C. Bondy, in memory of Margaret Carson Cowan
Central Presbyterian Church
Mr. and Mrs. James Petrie Chalmers, in memory of James Petrie Chalmers, Jr. "Chalmers Memorial Bed"
Robert A. Chambers, in memory of his father, Robert Chambers
Dunlevy Milbank, in memory of his mother, Ella Dunlevy Milbank
William D. Sloane (3 beds)
1917 Emeline Y. Danforth, in memory of Mrs. William B. Jenkins
Harris Brisbane Dick, to be known as the "Harris Brisbane Dick Free Bed"
Sarah C. Miller
Albert Winter, in memory of Adaline Benson Winter
1918 Ida Leora Olmstead, to be known as "Leora McCammon Bed"
1919 Samuel Elliott
Elizabeth Keys, in memory of her daughter, Edith Keys
Rutgers Presbyterian Church
James R. Steers, in memory of his former wife, Rebecca E. Steers
John W. Sterling
1920 William C. Boschen, to be known as the "Boschen Bed"
Rosa Franklin (4 beds)
Francis P. Furnald
Mrs. Francis P. Furnald
Mary A. Harriot, to be known as the "Margaret Harriot Alms"
Mary A. Harriot, to be known as the "James Harriot Alms"
Mrs. Henry O. Havemeyer, in memory of her parents, George William and Matilda Adelaide Elder
Margaret J. Orr, in memory of her mother, Ann Boyd Orr
Anna St. John, in memory of her brother, Milton St. John
1921 Mrs. Peter B. Wyckoff, to be known as the "Sidney Dillon Bed"
Henry M. Gescheidt
Ralph E. Prime, in memory of his daughter, Ruth Havens Prime
Joseph K. Gwynn
Charles S. Ward, in memory of his friend, Sophie L. Kinman
Charles S. Ward
1922 Minetta C. Howenstine (8 beds)
Christina C. Munro, in memory of her husband, John Munro
Anna M. Romaine, in memory of Dr. William I. Detmold
Arnold Thayer (2 beds)
Hamilton B. Tompkins, in memory of his wife and himself
1923 Lydia Augusta Brown
Josephine Newman Hall
1924 Bohemian Society "Lidumil"
Cordelia F. Turrell
Nannie Gyles Johnson (Children's Ward), in memory of her son, Shirley Everton Johnson
Mrs. William John Fitzgerald
1925 Christina Bond
In memory of Julia C. Skidmore
George Clarke
Elizabeth J. Hofer (2 beds)
In memory of Catherine Parke and Horatio C. Kretchmar
Edward M. Morgan Memorial Association (4 Beds)
In memory of Edward M. Morgan
Jennette Robertson, to be known as "Helen C. Inslee Endowed Bed"
1926 Elizabeth Ellen Auchincloss, to be known as "E. E. Auchincloss, Jr. Bed"
Members of the New York Stock Exchange, to be known as the Seymour LeGrande Cromwell Memorial (2 Beds)
Edmund Penfold (2 Beds), in memory of Josephine Penfold and William Hall Penfold
Dr. M. Allen Starr, in memory of Allen Egbert Starr

John B. Trevor, in memory of Emily N. Trevor
West End Collegiate Church
George D. Widener

1927 Second Presbyterian Church in the City of New York
Ellen Mills Borne, in the Children's Ward, two beds to be known as "John E. Borne Bed" and "Nellie M. Borne Bed"
Virginia Marquand Monroe, in the name of the Young Men's Christian Association
Mrs. Charles H. Senff, to be known as "Dr. George A. Tuttle Bed"
W. Frazer Gibson, in memory of his mother, Jeanette Frazer Gibson, to be known as "Jeanette Frazer Gibson Bed"
Augustus C. Gurnee, two beds in memory of his mother, Mary M. Gurnee
Eliza V. Nicholson
Mrs. Murray W. Dodge and Mrs. Franklin Lord, in memory of their mother, Mrs. Fordyce D. Barker (Single Ward Room)
Dunlevy Milbank (Single Ward Room)
F. Ethel Wickham, in memory of her father, William Hull Wickham, to be known as "William Hull Wickham Bed" (Single Ward Room)
Anna A. Johnston, in memory of her parents, William G. and Adriana C. Gardner
Anna A. Johnston, in memory of Lewis, Anna, Edward and Mary Johnston (Single Ward Room)
Broadway Presbyterian Church, to be known as the "Walter Duncan Buchanan Bed"

1928 North Presbyterian Church
In memory of McKevers Bayard Brown (Single Ward Room)
Caroline B. Sellew (4 Beds)
Red Cross Rooms for Nurses (3 Single Ward Rooms)
Robert W. deForest (Single Ward Room)
Henry W. deForest (Single Ward Room)
James R. Steers
Jane Livingston Armour, in memory of John A. Livingston
Jane Livingston Armour, in memory of Herman O. Armour
In memory of Meredith Howland Pyne
Stella C. and Roi C. Megrue (Single Ward Room)
Mrs. E. C. Wills, in memory of her mother, Mrs. J. F. Ackerman, and her sister, Mrs. W. Clarence Reed

1929 Caroline White, in memory of her sister, Eliza W. White
Elizabeth A. Hays, in memory of William and Charlotta Hays

1930 Mr. and Mrs. Ernest Trow Carter
The Presbyterian Church in the Town of Rye, N. Y.
Mrs. Arthur E. Lauderbach, in memory of her mother and father, Esther Hull Jackson and Peter A. H. Jackson
Mary L. Walker Peters, to be known as "The Charles Grenville Peters and Mary Walker Peters Free Bed"
Marie F. Coddington, to be known as "The Emilie Coddington Bed"

1931 Mrs. Clara Beales Obrig, in memory of Adolph Obrig and Clara Beales Obrig (Single Ward Room)
Alfred V. Meserole, in memory of his mother, Evelina A. Meserole

1932 In loving memory of Justine Adele Stafford (Mrs. W. F. Stafford) by her sister, Ida Evelina Bliss

1933 Mrs. John A. Hance and Mrs. Irene Louise Hance, in memory of James R. Jesup

1934 Ida Adams, in memory of her sister, Sadie E. and her brother, Robert F. Adams (Single Ward Room)
Josephine Leypoldt, in memory of her brothers, Louis and Frederick Leypoldt (2 Beds)

1935 Walter J. M. Donovan, in memory of his father, Timothy Donovan

1936 Elizabeth P. Hewes, to be known as "The Elizabeth P. Hewes Bed"
Dunlevy Milbank, in memory of his mother, Ella Dunlevy Milbank
Mary S. Thayer, to be known as "The Orlando Thayer Bed"

1937 Margaretta J. Gamble, to be known as "The Gamble Bed," in memory of her father and mother
Jeremiah Milbank, in memory of his father, the late Joseph Milbank
1938 Susetta L. Goss, to be known as "The Goss Bed," in memory of her parents, Rev. C. C. Goss and Theodosia C. Goss
Annie Miller, to be known as "The Mrs. Alexander Miller Memorial Bed," in memory of her mother, Mrs. Alexander Miller
Bertha H. Minturn, in memory of her most faithful and beloved nurse, Mary Humphries
Henry T. Sloane, to be known as "The Euphemia Sloane Coffin Bed," in memory of his sister, Euphemia Sloane Coffin
1939 "In Memoriam"
Dunlevy Milbank, in memory of his mother, Ella Dunlevy Milbank
1940 George Gibbs, to be known as "The George Gibbs Bed"
1942 Mrs. Huntington McLane, to be known as the "Therese K. Thorne Bed," in memory of her mother
Cornelia Livingston Pell, in memory of Alfred Duane Pell
Frank Wallach, in memory of Ida May Wallach
1943 Stuart Duncan, to be known as "The Stuart Duncan Bed"
1944 Anonymous, to be known as "The Dr. William Darrach Bed"
John Fraser, in memory of his parents, Alexander and Elizabeth Fraser
1945 Robert W. Carle, in memory of his mother, to be known as the "Cornelia Willets Carle Bed" for general hospital use including harelip and cleft palate cases
1947 W. and J. Sloane
Frederick Sturges, Jr., Mrs. Mary Armit Sturges, Mrs. Catharine Armit Chapman and Frederick Sturges, III, in memory of Frederick Sturges
Walter S. Gifford, in memory of his son, Walter Sherman Gifford, Jr.
Ida L. Darling, known as the "Richards Memorial Bed"
John Sloane, in memory of his wife, Elsie Nicoll Sloane, to be known as the "Elsie Nicoll Sloane Bed"
Elisa Smith Mabon, in memory of her husband, James Brown Mabon
1948 Otto M. Eidlitz, to be known as the "Eidlitz Bed"
1949 Effie B. Shearman
1950 Isabel Shields Kemp, to be known as "Mary M. Shields and the Dr. Robert Coleman Kemp Free Bed"
1951 Gerrish Hill Milliken
1952 William Dzus, to be known as the "Ukrainian Institute of America, Inc. Bed"

Memorial Endowed Beds for Research Purposes

1948 Mrs. William Barclay Parsons, in memory of her husband, William Barclay Parsons
Muriel Jane Rudinger Foundation, Inc., to be known as the "Muriel Jane Rudinger Bed"
1950 Charles E. Culpeper Foundation, Inc. (two beds)
1952 John F. Bush Memorial Bed
Estate of John H. Bahrenburg, in memory of John H. Bahrenburg and Elizabeth Bahrenburg (ten beds)
Estate of Selma Boyd, two beds each to be known as a "Boyd Bed"
Bruce Barton, in memory of his wife, to be known as the "Esther Randall Barton Memorial Bed"

Endowed Rooms

1903 Henry H. Rogers, known as "Room J"
1905 Mrs. Morris K. Jesup, to be known as the "Eliza DeWitt Memorial Room"
1910 Mrs. John Stewart Kennedy, in memory of her husband, to be known as the "J. S. K. Memorial Room"

1912 Peter Cumming, to be known as "Peter Cumming Memorial Room"
1926 Alumnae Association of the School of Nursing of The Presbyterian Hospital, to be known as the "Amabel G. Roberts Memorial Room"
1928 Mrs. William Sloane, to be known as "The William Sloane Room for Graduate Nurses"
1930 The Sarah A. Hard Taylor Memorial Fund, to be known as "The Sarah A. Hard Taylor Room"
1935 Mrs. Herbert Neal, in memory of her husband, James Norman Hill, deceased
1937 S. Augusta Mora, in memory of her husband, Frank Mora, and mother, Sarah Robson Van De Water

Babies Hospital

1892 The Cribside Committee, known as "Cradyl-Nyst"
1894 Miss Ellen James Evans
Mrs. Henry G. Trevor
1895 Mrs. Evan T. Walker
Mrs. Richard Arnold, in memory of Georgiana Arnold
1897 Mr. and Mrs. Chas. M. Fry, known as the "Mr. and Mrs. Chas. M. Fry Bed"
Mrs. Geo. Kemp, "For the use and purposes of the Hospital"
1898 Mrs. Oliver G. Jennings, known as the "Brewster Bed"
1899 Mr. and Mrs. John Sherman Hoyt, in memory of John Sherman Hoyt, Jr.
1900 Mrs. Elizabeth Chamberlin Lockwood, in memory of Emily Beaver Chamberlin
1902 Mr. and Mrs. W. E. Dodge, in memory of Grace Osborn
Henry P. Wertheim, in memory of Clara W. Wertheim
1904 Mr. and Mrs. George Arents, in memory of George Arents Brown
Estate of Mrs. Chas. Harvey Hartman
1905 Mrs. J. Henry Lane
Mrs. Daniel S. Lamont, known as the "Julia Lamont Bed"
1907 The Cribside Committee
1908 Arthur W. Butler, in memory of Elizabeth Marshall Butler
1910 Dr. and Mrs. L. Emmett Holt, in memory of Kenneth M. Holt
Edwin Clarence Moller, in memory of Peter Moller
1911 Emily A. Watson, in memory of Wheeler Watson
Mrs. Bradley Martin, in memory of David Bradley Martin
1912 In loving memory of J. Bradley Cumings, endowed by his friends. "Greater love hath no man than this, that a man lay down his life for his friends."—*St. John 15:13*
1914 Mrs. Andrew Carnegie, in memory of Archibald Fraser Barrow
Mrs. Robert W. Todd, known as the "Mabel Todd Bed"
1916 Mr. and Mrs. John Chandler Moore, in memory of Edward de Bébian Moore
Mrs. John Hubbard, in memory of Margaret Fahnestock
Mrs. Clarence M. Hyde, known as the "Clara Mathewson Hyde Bed"
1917 Harris Brisbane Dick, known as the "Harris Brisbane Dick Free Bed"
Mrs. Edward S. Harkness, known as the "Thomas Stillman Taylor Bed"
Mr. and Mrs. Walter A. Hirsch, in memory of John Walter Hirsch
1919 Mr. and Mrs. Daniel Schnakenberg, in memory of their daughter, Anna Kate Bartlett
Mrs. John Jay Knox, in memory of John Jay Knox
Mrs. John Jay Knox, in memory of Dr. Reuel B. Kimball
1920 Mrs. Andrew Carnegie, "A thanks offering for Louise Carnegie Miller"
1921 The Estate of Jacob H. Schiff
1922 The Cribside Committee, in memory of Sarah Elizabeth Williams
Mr. and Mrs. Simon Guggenheim, in memory of their son, John S. Guggenheim

1923 Mr. and Mrs. Herman Armour Nichols, "In loving memory of Marie Louise Nichols"
1929 The Estate of Julia M. Stout
1930 Editb C. Thompson, in memory of ber mother, Mrs. Grace H. Thompson
1934 West End Collegiate Churcb
1935 The Estate of Daniel Schnakenberg, in memory of his children, Daniel Schnakenberg, Jr., and Marie Schnakenberg
1936 The Estate of Carrie Guggenbeim
1938 Tbe Estatc of Emily S. Hornblower, in memory of her stepdaughter, Susie Sanford Hornblower
1949 Dr. Frederic H. Bartlett, "Endowed in loving memory of Frederic H. Bartlett, M.D., 1872-1948, by his patients and other friends to commemorate his many years of faithful service in Babies Hospital"
1950 The Estate of Emelyn L. Coolidge, in memory of Marianna Wheelcr and Emclyn L. Coolidge, M.D., to be known as "The Wheeler-Coolidge Bed"

Neurological Institute

1929 Red Cross Endowcd Bed for Nurses
Rivington-Dwyer Endowed Room for Nurses
1943 Alice Dunning Starr, in memory of her husband, Allen Starr

New York Orthopaedic Dispensary and Hospital

1883 Miss C. B. Hicks, continued in perpetuity by Buchanan Winthrop
1886 Mrs. Elizabeth Milbank Anderson, four beds, in memory of J. Milbank Anderson
1891 Alfred Corning Clark, three beds
Edward Severin Clark, two beds, to be known as the "Edward Severin Clark Beds"
Mrs. Henry S. Winthrop
1893 Mrs. William D. Sloane, in memory of William Douglas Sloane, Jr.
James K. Gracie, in memory of Anna Bullocb Gracie
Miss Sarah B. Gibbs
1894 Mrs. Richard Tylden Aucbmuty, two beds, in memory of Ricbard Tylden Auchmuty
James H. Jones
1896 Mrs. William Astor, in memory of Helen Roosevelt
Mrs. Evan T. Walker, in memory of John J. Walker
1897 Mrs. William D. Sloane, two beds, one bed in memory of Maria Louise Vanderbilt and one in memory of Emilie Vanderbilt Burden
1898 Mrs. Charles B. Alexander, for her daughter, named the "Harriet Alexander Bed"
1901 Mrs. N. A. Baldwin, in memory of Louise Suydam Duer
Mrs. Benjamin Brewster, in memory of Benjamin Brewster
Henry T. Sloane, Jessie and Emily Sloane, bed endowed by tbeir fatber
Mrs. Marion Story, in memory of M. Furman Hunt
1902 James Henry Smith, two beds, in memory of George Smith
Miss Emily A. Watson, in memory of Mrs. Mary J. Walker
1904 Miss Cornelia Prime, in memory of her brother, Temple Prime
Miss Helen Pbipps
James K. Gracie, in memory of Esther Gracie Ogden
1906 Miss Caroline White
Mrs. M. Dwight Collier, in memory of Maurice Dwight Collier
1908 Mrs. H. N. Munn, Mrs. Augusta Munn Tilney and Orson D. Munn in memory of Henry Norcross Munn
1911 Estate of Everetta C. Whitney
Miss Josephine C. Smith, in memory of ber fatber, Dr. Edward A. Smitb, and ber motber, Rebecca Miller Smitb

1913 Estate of Marion de Forest Clark, in memory of Julian Bouton Clark
An anonymous donor, to be known as "Mary Townsend Cuyler Bed"
Carolina F. Butterfield, in memory of Frederick Falconer Butterfield
1915 Miss Emily Trevor
Mrs. Frederick W. Vanderbilt to be known as "The Louise Bed"
George Grant Mason, two beds, in memory of his uncle, James Henry Smith
1916 Henry M. Tilford, in memory of Catharine Hunt Tilford
Estate of Miss Clementine Furniss, to be known as the "Clementine Furniss Bed"
An anonymous donor
1917 Mrs. Charles H. Senff, in memory of her little son, Henry Senff
Mrs. A. Murray Young, in memory of her great uncle, Wilson G. Hunt
1919 R. Fulton Cutting, to be known as the "Helen Suydam Cutting Bed"
Mrs. Frederick Delano Hitch
Levi P. Morton, in memory of Anna Livingston Morton
Miss Georgiana G. R. Wendel, two beds, "In Memory of My Sister, Augusta A. S. Wendel"
Various donors, in memory of Theodore Roosevelt
1920 Mrs. John Hobart Warren
1921 Mrs. Winthrop W. Aldrich, in memory of her little son, Winthrop Williams Aldrich, Jr.
F. Ambrose Clark, to be known as "The Florence L. Clark Bed"
1922 Mrs. David T. Dana, in memory of her mother, Mrs. M. Dwight Collier
1924 Estate of Charlotte Bruce Bickmore, in memory of Albert Smith Bickmore, Jr.
Mrs. Louise Ward McAllister Lewis, in memory of her mother
1925 Miss Elizabeth J. Hofer, two beds, in memory of Horatio C. Kretchmar
Percy Chubb, in memory of his wife
Junior Red Cross of the Public Schools of New York
Mrs. Douglas Robinson, in memory of her friend, Charles Allen Munn
1926 Junior Red Cross of the Public Schools of New York
1927 Darrach Home for Crippled Children, in memory of Dr. May Darrach
1928 Mrs. Mary L. Schoonmaker, ten beds, in memory of Sylvanus Lothrop Schoonmaker and Frank Layng Schoonmaker
Estate of Henry D. Dickinson, in memory of Hathaway M. Dickinson
1930 James T. and Sarah Bancroft Leavitt, to be known as the "Mrs. James T. Leavitt Bed"
1934 Henry C. deRham, Frederic F. deRham and Clarisse deRham Rutherfurd, in memory of their parents, Charles and Emily Howe deRham
1935 Mrs. Percy R. Pyne and family, in memory of Meredith Howland Pyne
1936 Miss Elizabeth Stewart Hamilton, in memory of Mrs. John Hobart Warren, to be known as the "Harriette Mott Warren Bed"
Mrs. Edward S. Harkness, to be known as "Dorcas House Bed" in dear memory of Wilma Gideon
1938 Miss Grace Howard Potter, to be known as the "Howard and Mary Louisa Potter Bed," in memory of her father and mother

Endowed Rooms

1922 Glenn Ford McKinney, a ward room in the country branch, in memory of his wife, Jean Webster McKinney
1929 400 of his friends and associates, a room in the private pavilion, in memory of H. Le Roy von Lackum, M.D., surgeon in this hospital, 1916-1928

Herman Knapp Memorial Eye Hospital
(Institute of Ophthalmology)

1883 Mrs. Oswald Ottendorfer
1884 Miss Henrietta A. Lenox
1895 Miss Mary Morris van den Heuval
1897 Mrs. Giovanni Ceccarini

1913 Miss Catherine A. Bliss
Miss D. Willis James
1918 Truman Peck Stone
1921 Miss Rosie Bernheimer (In memory of her parents)
1923 Miss Mary Wiley (In memory of her brother, George Wiley)
1928 Mrs. Matilda Townsend Palmer
1931 Leo Doblin
1936 Charles M. Brooks

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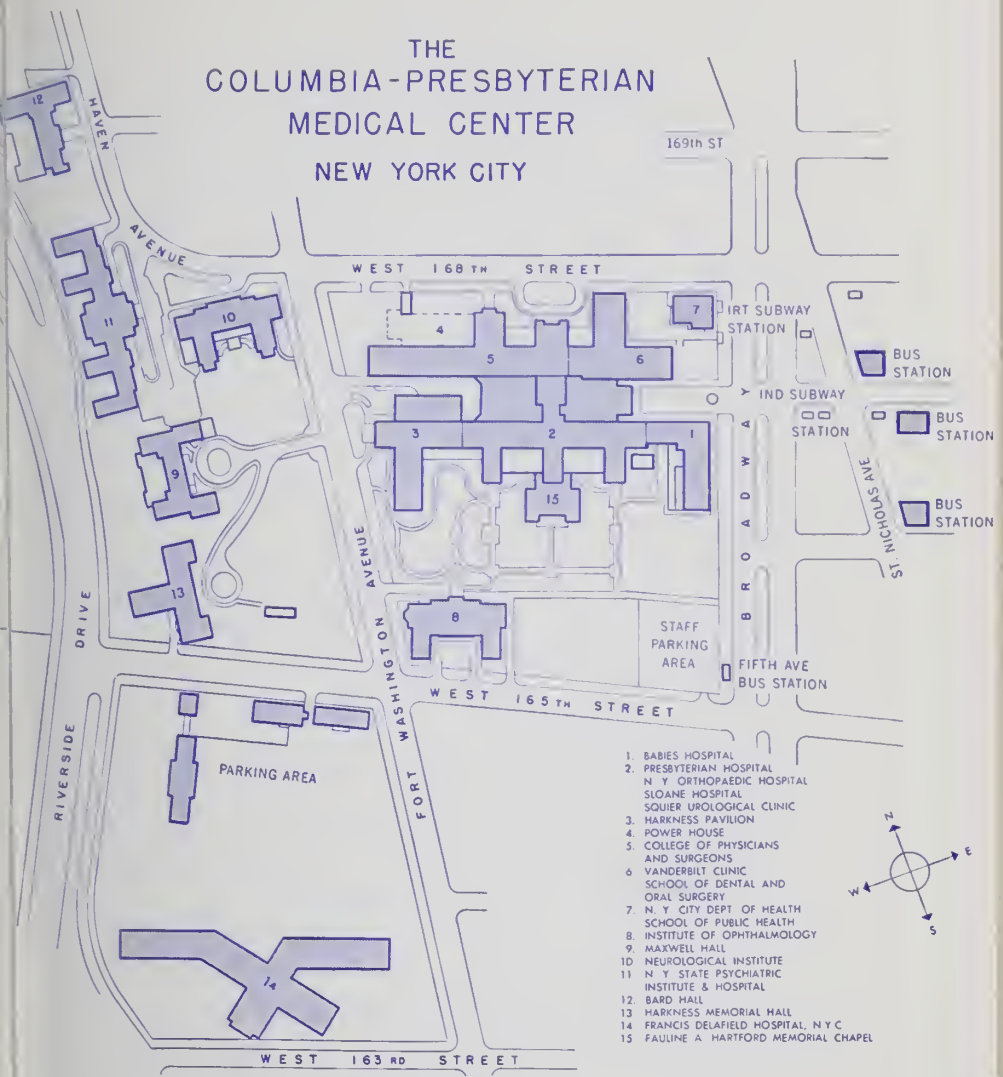
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THE
COLUMBIA-PRESBYTERIAN
MEDICAL CENTER
NEW YORK CITY
169th ST
WEST 168TH STREET
IRT SUBWAY STATION
BUS STATION
IND SUBWAY STATION
BUS STATION
BUS STATION
BROADWAY
ST. NICHOLAS AVE
HAVEN AVENUE
AVENUE
DRIVE
RIVERSIDE
FORT WASHINGTON
STAFF PARKING AREA
FIFTH AVE BUS STATION
WEST 165TH STREET
PARKING AREA
WEST 163RD STREET
1. BABIES HOSPITAL
2. PRESBYTERIAN HOSPITAL
N Y ORTHOPAEDIC HOSPITAL
SLOANE HOSPITAL
SQUIER UROLOGICAL CLINIC
3. HARKNESS PAVILION
4. POWER HOUSE
5. COLLEGE OF PHYSICIANS AND SURGEONS
6. VANDERBILT CLINIC
SCHOOL OF DENTAL AND ORAL SURGERY
7. N. Y CITY DEPT OF HEALTH
SCHOOL OF PUBLIC HEALTH
8. INSTITUTE OF OPHTHALMOLOGY
9. MAXWELL HALL
10 NEUROLOGICAL INSTITUTE
11 N Y STATE PSYCHIATRIC INSTITUTE & HOSPITAL
12. BARD HALL
13 HARKNESS MEMORIAL HALL
14 FRANCIS DELAFIELD HOSPITAL, N Y C
15 FAULINE A HARTFORD MEMORIAL CHAPEL
N
E
W
S



BABIES HOSPITAL

HARKNESS PAVILION

INSTITUTE OF OPHTHALMOLOGY

MARY HARKNESS HOME

NEUROLOGICAL INSTITUTE

N. Y. ORTHOPAEDIC HOSPITAL

PRESBYTERIAN HOSPITAL

SLOANE HOSPITAL

SQUIER UROLOGICAL CLINIC

VANDERBILT CLINIC



Annual Report for 1953

of

THE PRESBYTERIAN HOSPITAL

at

COLUMBIA-PRESBYTERIAN MEDICAL CENTER

Gifts and Bequests

The activities of the various hospitals at the Medical Center are supported to a substantial extent by the income from bequests and devises from friends of the various hospitals, who have desired to insure the continuation of their help to the sick of New York.

Bequests and devises may be made in the following form:

FORM OF BEQUEST

I give and bequeath to The Presbyterian Hospital in the City of New York the sum ..... dollars ($) to be applied to the use and benefit of the said Hospital, under the direction of the Trustees thereof.

FORM OF DEVISE

I give and devise to The Presbyterian Hospital in the City of New York all that, etc. (describe the property), to be had and holden to the said The Presbyterian Hospital in the City of New York, its successors and assigns, for the use and benefit of the said Hospital.

In case it is desired to make the bequest to the Hospital as a memorial "In memory of ....." may be added to the Form of Bequest or Devise.

In all instances the gift should be to "The Presbyterian Hospital in the City of New York" in its full corporate name even when mentioning the particular use to which it is to be put.

The corporation will, because of the consolidation of the corporations formerly administering the Medical Center hospitals, become entitled to gifts to the former corporations. It will, therefore, not be necessary to change the provisions of any will naming The Babies Hospital of the City of New York, Neurological Institute of New York or New York Orthopaedic Dispensary and Hospital as beneficiary.

EDWARD C. BENCH,
Treasurer.

MEDICAL CENTER

EIGHTY-FIFTH ANNUAL REPORT

THE PRESBYTERIAN HOSPITAL
IN THE CITY OF NEW YORK

Including

BABIES HOSPITAL
HARKNESS PAVILION
INSTITUTE OF OPHTHALMOLOGY
MARY HARKNESS HOME
NEUROLOGICAL INSTITUTE
N. Y. ORTHOPAEDIC HOSPITAL
PRESBYTERIAN HOSPITAL
SLOANE HOSPITAL FOR WOMEN
SQUIER UROLOGICAL CLINIC
VANDERBILT CLINIC

BROADWAY AND 168th STREET
NEW YORK 32, N. Y.



For the Twelve Months ended December 31, 1953

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ORIGIN AND FUNCTIONS OF THE MEDICAL CENTER

The Medical Center comprises a group of long established hospitals of high standing which, in affiliation with the College of Physicians and Surgeons of Columbia University, furnish an integrated program to provide the highest quality of medical care for the sick and injured, to advance knowledge regarding the cause, prevention and treatment of disease and disability, and to train men and women in the professions of medicine, dentistry, nursing, public health, and allied fields. Through the affiliation between the hospitals and the University the members of the staffs of the hospitals are nominated by Columbia University, and teaching and research are conducted in all of the hospitals.

A brief description of the origin and of the functions of each hospital unit of the Medical Center is given in the following paragraphs.

The Presbyterian Hospital

The Presbyterian Hospital, founded as a general hospital in 1868 by James Lenox, was originally located on the block bounded by Madison and Park Avenues between 70th and 71st Streets. On April 25, 1911, Presbyterian Hospital made its original arrangement with Columbia University's College of Physicians and Surgeons for coordinating the care of the sick with the educational and research program of the University. Now Presbyterian Hospital is the largest single unit of the Medical Center. The Hospital occupies a 22-story building in which are the wards of the medical and surgical services, obstetrical and gynecological services, urological service, ear, nose and throat service, dermatological service and the orthopedic surgery service. To provide for personal contact between doctor and patient, the Hospital is divided into floor units of between 60 and 70 beds, each unit fully equipped and in charge of the special staff of doctors, nurses, social workers and dietitians.

The Presbyterian Hospital in the City of New York is the corporate title for all the voluntary hospitals and clinics at The Columbia-Presbyterian Medical Center. The group consists of the following units:

Babies Hospital

Babies Hospital, 167th Street and Broadway, founded in 1887, pro-

vides for general medical and surgical care of infants and children up to their thirteenth birthday, and care for premature babies. The total capacity of the Hospital is 191. One floor is devoted to the care of private and semi-private patients. Both outdoor and indoor playrooms are provided for convalescent children. Laboratories are operated for the routine and research work of the Hospital in pathology, microbiology and chemistry. An X-ray and fluoroscopic department is operated under the direction of the Hospital radiologist. An outpatient department is maintained in Vanderbilt Clinic by the visiting and house staff of the Hospital. In addition to the general medical and surgical clinics there are special clinics for children suffering from heart disease, tuberculosis, epilepsy, asthma and other diseases.

Harkness Pavilion

Harkness Pavilion, 180 Fort Washington Avenue, erected at the time of the establishment of the Medical Center, is available for the accommodation of 283 adult private patients of the attending staff.

The Mary Harkness Convalescent Home

Mary Harkness Convalescent Home, King Street, Port Chester, N. Y., opened in 1937 to provide convalescent care for adults and the new Strong Memorial Wing was opened in 1952 to care for handicapped children whose families are unable to provide the convalescent care following poliomyelitis, orthopedic, medical and surgical procedures. In a beautiful country setting there are facilities for convalescent care available for 35 adults and 22 children.

The Institute of Ophthalmology

Institute of Ophthalmology, 635 West 165th Street, opened in 1933 has complete facilities for the medical and surgical treatment of adult and child patients with diseases of the eye. The bed capacity is 92 of which 45 are ward beds. On January 1, 1940, the work of the Herman Knapp Memorial Eye Hospital was taken over by the Institute.

The Neurological Institute

Neurological Institute, 168th Street and Fort Washington Avenue, one of the first nongovernmental hospitals in this country for the treatment of nervous diseases, was founded in 1909. It moved from East 67th Street to the Medical Center in 1929. Its affiliation with The Presbyterian Hospital has made possible a broad basic program of teaching and

research in neurology and in the treatment of diseases of the nervous system and surgical conditions of the brain and nervous system. Facilities are provided for 211 bed patients of which 124 are for ward patients.

New York Orthopaedic Dispensary and Hospital

The New York Orthopaedic Dispensary and Hospital opened its first dispensary in 1866 largely as a result of the interest Theodore Roosevelt, whose son and namesake became President, had in the care of the crippled. In succeeding years, the dispensary grew into a hospital with beds for ward and private patients. In 1911, the first Spine Fusion Operation for Potts Disease (tuberculosis of the spine) was performed by Dr. Russell A. Hibbs. This successful operation opened an entirely new era in the treatment of this disease. The Orthopaedic Dispensary and Hospital was located in its own buildings at 420 East 59th Street until December 1950 when it moved to the Medical Center. On the 5th floor of the main building, 622 West 168th Street, facilities are available for the care and treatment of orthopedic conditions and fractures in children and adults.

The School of Nursing

The School of Nursing was founded in 1892 for the training of nurses. Since 1935 its educational program has been under the supervision of the Department of Nursing of the Faculty of Medicine of the College of Physicians and Surgeons of Columbia University. A three-year course in nursing is conducted, and the degree of Bachelor of Science is offered by the University to those properly qualified.

The Sloane Hospital for Women

Sloane Hospital for Women was built at West 59th Street and Amsterdam Avenue and presented to Columbia University by Mr. and Mrs. William D. Sloane in 1886. It now occupies three floors of The Presbyterian Hospital building for ward and semi-private patients and two floors in Harkness Pavilion for private patients. The total bed capacity is 192 of which 116 are ward beds. Patients, other than emergencies, are admitted through the Vanderbilt Clinic. The deliveries in the Hospital number about 3,700 a year.

The J. Bentley Squier Urological Clinic

The J. Bentley Squier Urological Clinic occupies the 10th floor of the Presbyterian Hospital building and the 10th floor of Babies Hospital. There are 67 beds for the care of adults and 19 beds for children. There

are laboratories fully equipped to do diagnostic, X-ray, bacteriological, pathological, fluoroscopic, and research work. This unit has two large, especially equipped, operating rooms. The urological outpatient department is in Vanderbilt Clinic.

Vanderbilt Clinic

Vanderbilt Clinic, Broadway and 167th Street, presented to Columbia University by the Vanderbilt family in 1888, is the common outpatient department and admitting service for all the wards of all the units of the Presbyterian Hospital. It is a fully equipped dispensary offering complete medical, surgical and specialty services. Eligibility to the Clinic is determined by the admitting physician and the clinic interviewer and is limited to those unable to afford a private physician. The Group Practice Clinic, organized in 1946, has proved a forward step in the diagnosis and treatment of patients.

Other institutions located at the Medical Center are —

The New York State Psychiatric Institute and Hospital, a 200 bed hospital, built and maintained by the State of New York with provisions for the study and treatment of all types of psychiatric disorders.

The Francis Delafield Hospital, built and maintained by the City of New York, is a 300 bed hospital for the treatment and study of cancer.

The Washington Heights Health and Teaching Center built and maintained by the City of New York.

MILESTONES OF THE COLUMBIA-PRESBYTERIAN MEDICAL CENTER

1928-1953

1928	Presbyterian Hospital including Sloane Hospital for Women and Squier Urological Clinic
	Vanderbilt Clinic
	College of Physicians and Surgeons
	School of Dental and Oral Surgery
	De Lamar Institute of Public Health
	Harkness Pavilion
	Anna C. Maxwell Hall
1929	Babies Hospital
	New York State Psychiatric Institute and Hospital (Built and maintained by the State of New York)
	Neurological Institute
1931	Bard Hall
1933	Institute of Ophthalmology
1937	Mary Harkness Convalescent Home
	College of Physicians and Surgeons—10 stories added to west wing
1940	Washington Heights Health and Teaching Center (Built and maintained by the City of New York)
1947	Edward S. Harkness Memorial Hall
1950	New York Orthopaedic Hospital—5th floor of Presbyterian Hospital reconstructed
	Francis Delafield Hospital (Built and maintained by the City of New York)
1951	Institute for Cancer Research
1952	The Pauline A. Hartford Memorial Chapel
	Strong Memorial Wing (Mary Harkness Convalescent Home)

Report of the President

Report of the President for 1953

A quarter-century of service—on October 12 and 13, 1953 the Presbyterian Hospital and Columbia University jointly celebrated the Twenty-fifth Anniversary of the Columbia-Presbyterian Medical Center.

Leading medical educators trained at the Medical Center, and now serving other renowned institutions, met with representatives of national and world medical associations, and those of state and federal governments.

Nine concurrent symposia were presented by the Medical Center's professional staff, panel discussions were held and the work of nearly every department was depicted in seventy-three exhibits.

For the first time in the history of the Medical Center, the alumni associations of all its units gathered together at a dinner attended by 1,273 alumni members, their wives, and members of the Medical Center family. Tribute was paid to those whose generosity and foresight conceived and brought into being the Medical Center as a cooperative unit for patient care, teaching, and research; and our resolve to ever widen and advance its original humanitarian purposes and aims was further strengthened.

Honorary Degrees and Distinguished Service Awards

The culmination of the anniversary ceremony was the Academic Convocation.

The following Honorary Degrees were awarded by Columbia University:

Doctor of Science—Dr. Leonard A. Scheele, Surgeon General of the United States Public Health Service

Doctor of Laws—William E. S. Griswold, Senior, Vice-President of the Presbyterian Hospital and member of the Board of Trustees since 1922.

At the same time, Distinguished Service Awards were presented jointly by Columbia University and the Presbyterian Hospital to the following individuals:

Charles F. Bodecker, Professor Emeritus of Dentistry

Louis Casamajor, Professor Emeritus of Clinical Neurology; Consultant

A. Raymond Dochez, John E. Borne Professor Emeritus of Medical and Surgical Research; Consultant

Henry S. Dunning, Professor Emeritus of Dentistry

Haven Emerson, Professor Emeritus of Public Health Service

John M. Hanford, Consultant—Surgery

James W. Jobling, Delafield Professor Emeritus of Pathology
John D. Kernan, Professor Emeritus of Otolaryngology; Consultant
Arnold Knapp, Professor Emeritus of Ophthalmology; Consultant
Albert R. Lamb, Professor Emeritus of Clinical Medicine; Consultant
Charles C. Lieb, Hosack Professor Emeritus of Pharmacology
Howard S. Mason, Consultant—Pediatrics
Alwin M. Pappenheimer, Professor Emeritus of Pathology
William Barclay Parsons, Professor Emeritus of Clinical Surgery; Consultant
Henry Alsop Riley, Professor Emeritus of Clinical Neurology; Consultant
Fordyce B. St. John, Professor Emeritus of Clinical Surgery; Consultant
Philip E. Smith, Professor Emeritus of Anatomy
Byron Stookey, Professor Emeritus of Clinical Neurological Surgery; Consultant
Benjamin P. Watson, Professor Emeritus of Obstetrics and Gynecology; Consultant
Allen O. Whipple, Valentine Mott Professor Emeritus of Surgery; Consultant
Herbert B. Wilcox, Professor Emeritus of Pediatrics
Horatio B. Williams, Dalton Professor Emeritus of Physiology
Helen Young, Director of Nursing Emeritus
Edwin G. Zabriskie, Professor Emeritus of Clinical Neurology; Consultant

Many persons, living and deceased, have made noteworthy contributions to the development of the Medical Center, and it was difficult to select only twenty-five individuals to be honored on the occasion of the twenty-fifth anniversary. The recipients represent the major branches of medicine, as well as dentistry and nursing. It is interesting to note that their average years of service to medical science is forty-five years.

How the Presbyterian Hospital Met its Financial Problems in 1953

In the twenty-five years at the Medical Center, the Hospital's annual costs have grown to almost $16,000,000 as additional units have joined the Hospital and improved medical techniques have been developed. At the same time inflation has brought increases in costs. In 1928 an average hospital stay of sixteen days cost $170; today an average stay of only twelve days costs $320—an increase of 88 per cent. During this period the average income of the wage earner has increased considerably more. The expenses involved in new diagnostic and therapeutic procedures and other technological advances have, for the most part, been offset by

savings resulting from a reduction of four days in the average hospital stay of the patient.

Thus, inflation itself is the primary cause of rising costs of medical care. Offsetting this, the patient and society get direct benefits in that the patient is able to return sooner to his normal life and earning capacity.

During this period of increasing operating expenses, the Hospital has been fortunate to have received additional endowment funds and gifts. However, income from endowment funds and gifts now support but 21 per cent of the Hospital's operating expenses as compared with 34 per cent twenty-five years ago.

Figures cannot picture the true value of the intangible services which contribute largely to the health of the patient, to the education of the medical and nursing students, and to research projects. However, the following summary of the Hospital's patient care statistics and financial results is presented:

In 1953 the Presbyterian Hospital . . .

provided	450,300	days of hospital care
for	36,500	in-patients
and clinic care for	52,100	out-patients
who made	385,400	clinic visits
this cost	$ 9,515,000	for salaries
and	6,423,000	for supplies, services and depreciation
totaling	$15,938,000	
we received	$10,932,000	from patients
	3,323,000	from endowment income and gifts
	1,314,000	from other services
totaling	$15,569,000	
the difference	$ 369,000	must be made up from General Funds

The cost of the care given to indigent patients in the wards and clinics of the Hospital exceeded payments received during the year by over $3,500,000. This charitable service represents 44 per cent of the total operating cost of the wards and clinics and would not have been possible without endowment and gifts from friends.

In 1953, 45 per cent of the total ward and clinic operating cost of $8,000,000 was paid by patients, many of whom carry Blue Cross or other insurance, and 11 per cent of the total cost was paid by governmental and other agencies.

Voluntary Health Insurance

The growth and value of Blue Cross and other insurance plans to cover hospital and medical expenses are of great importance.

At the close of 1953 approximately one hundred million persons in the United States were covered by some form of insurance against hospital expenses. In 1928, when the Medical Center opened its doors, insurance of this type was practically non-existent and Blue Cross plans still were to be born. Ten years ago, the number of persons covered against hospital expenses was less than twenty-five million.

Today over 65 per cent of the patients admitted to this Hospital have some form of hospitalization insurance, primarily Blue Cross.

The courage and foresight of the pioneers in this field merit our deepest respect. All must continue to work together to ease the costs of illness through this medium of planning and saving.

The determination of individuals to assume as much responsibility as possible, personally, for their health and cost of medical care is evidenced in the growing numbers of ward and clinic patients who carry Blue Cross or other insurance.

With the expansion of Blue Cross plans it is, of course, natural for hospitals to be concerned with the reimbursement rates of these plans, not only to protect their financial condition but to maintain the high quality of patient care. It is incumbent on all insurance plans, governmental agencies, and organizations insuring or providing financial assistance for hospital patients to be prepared to reimburse hospitals for new and increased costs of care and include depreciation of hospital buildings and equipment in these costs.

Depreciation Now Reflected in Operating Expenses

During the year a policy was inaugurated to provide for depreciation of the cost of Hospital buildings and equipment so as to include in operating expenses the amortization of these capital assets during their estimated useful lives. The annual provision for depreciation must be included in operating expenses in order to provide, in part, for the future replacement of Hospital buildings and equipment, and also to determine the proper cost of Hospital services which can be used as a basis for establishing adequate

reimbursement rates. The accumulated depreciation since the opening of the Medical Center in 1928 is $10,815,000, of which $871,000 is the provision for 1953 which has been included in operating expenses.

In order to fund the accumulated depreciation cash is set aside each year and invested as a replacement fund, which will ultimately equal the accumulated reserve for depreciation. This is a significant step forward in the Hospital's financial policy.

Wider Responsibility for Comprehensive Medical Care

The concept that medical care begins and ends at the hospital door has long since passed. The Presbyterian Hospital has been at the vanguard of thought and practice in which not only the disease but the patient is treated as a whole.

With the broadening concepts of preventive medicine, the increased awareness of the influence of environment upon the health of man, the great strides in knowledge gained through research, the technical advances and the introduction of ancillary services and integrating agencies, the services now available to the patient were undreamed of at the turn of the century.

In 1904 a social service department was introduced at the Presbyterian Hospital because it appeared clear at that time that socio-economic problems played an important role in the maintenance of health. In 1915 and 1916 routine follow-up clinics and a unit history system were established because it was apparent that the "longitudinal" study and care of the patient through the years was of far greater importance than periodic observation. In 1921 studies on the importance of constitution as a factor in health and disease and the "personality panel" as an integral part of the diagnosis of a patient were introduced by Dr. George Draper. Seven years ago a Group Clinic was established embracing the essentials of group practice which, it is predicted, will be the basis for adequate medical care of the future.

While these developments have been taking place preventive medicine, which must not be thought of as a separate field of the practice of medicine, has been implemented throughout the Hospital. It is practiced by the obstetrician in prenatal and maternal care; the pediatrician in immunization procedures, child guidance, and other disciplines; and, through social service in the understanding of the patient's economic, social and other environmental aspects which might affect his health; through nutrition and dietary management; through rehabilitation programs and follow-up clinics.

It is the responsibility of the Presbyterian Hospital to continue its splendid record of leadership and to translate promptly for the patient's welfare those advances in medical research and education which provide for the total care of the patient in health and in illness.

Our Goal — Less Time Between Knowledge and its Application

It is becoming increasingly important to cut down the time lag between medical knowledge and widespread medical application of such knowledge. Optimum health, the feeling of well-being that adds to personal happiness and increases the productive capacity of the individual, is the ultimate goal—not remedial medicine and surgery alone. This awareness, already bearing fruit in the growth of preventive medicine and in the increase in prepaid medical plans, can be the most important single factor in our strength as a leader among nations and peoples. The goal can only be achieved when every one of us is fully conscious of our own health potential and assumes responsibility for it.

Contributions

A voluntary teaching hospital is expected to provide leadership in establishing and maintaining the highest possible standards in patient care, teaching, and research. It also enjoys the confidence of those individuals and organizations who are interested in, and help make possible the best medical care, regardless of the patient's ability to pay. All of us are fully aware of this great trust and are deeply grateful to all those individuals, foundations, associations, corporations and trustees who have supported our Hospital so generously.

The significant advances in the threefold function of patient care, teaching and research are recorded in the individual reports of the Directors of Services for the year 1953 which follow.

To the legion who give of their time and talents we are also most grateful. Seven Presbyterian Hospital teams work in the annual United Hospital Fund Campaign—the Trustees Men's Team, the Joint Professional Staff, the Women's Auxiliary of the Presbyterian Hospital, the Neurological Institute Auxiliary, the Women's Auxiliary of the New York Orthopaedic Dispensary and Hospital, the Board of Women Managers and Cribside Social Service Committee of the Babies Hospital.

Trustees

Mr. Carll Tucker, who served as a member of the Board of Trustees of Babies Hospital from 1916 until its consolidation with the Presbyterian Hospital and as a Vice-President of the Presbyterian Hospital since 1933,

retired from active membership on the Board and was elected an Honorary Trustee. Mr. Edward C. Bench was elected Vice-President and Treasurer; Mr. W. Alton Jones and Mr. F. Vinton Lawrence, Jr. were elected members of the Board of Trustees.

Other changes on the Board included the return of Mr. Robert A. Lovett from leave of absence; also, leaves of absence were granted to Mr. Winthrop W. Aldrich, Ambassador to the Court of St. James, and to Mr. Frederick A. O. Schwarz, General Counsel to the High Commissioner of Western Germany. Mr. Edgar A. Newberry and Mr. Charles S. Munson, former alternate members were made regular members representing the Hospital on the Joint Administrative Board, and Mr. Henry C. Alexander and Mr. W. E. S. Griswold, Jr. were appointed alternate members. Twenty-seven new corporation members were elected.

Individual members of the Board have devoted much time and energy to the problems placed before them. Their interest and devotion to the Hospital is deeply appreciated.

Auxiliaries

The six Women's Auxiliaries of the Medical Center give valuable service in their respective units. Each auxiliary has its own program but in general their purpose is threefold—financial assistance to the Hospital in support of specific projects, volunteer service within the Hospital, and as public relation emissaries within and without the Hospital.

It would not be possible to estimate the hours these two hundred dedicated women give to the Hospital's business. Each Auxiliary—the Babies Hospital Board of Women Managers, the Cribside Social Service Committee of the Babies Hospital, the Neurological Institute Auxiliary, the Auxiliary of the New York Orthopaedic Hospital, the Presbyterian Hospital's Auxiliary and the Women's Auxiliary of the Mary Harkness Convalescent Home, assume responsibility for important activities and perform countless acts that are of vital importance to the patients and to the Hospital's management.

The Volunteer Department, supported by the Auxiliaries, serves all Hospital units and clinics. Six hundred and thirty-five different volunteers during 1953 gave 67,225 hours of volunteer service, a most gratifying gain of almost 100 per cent in three years.

Professional Staff

Confidence in the professional staff of the Medical Center is attested by the number of patients with difficult problems who come to the Pres-

byterian Hospital from nearly every country in the world, by the numbers of young men and women who seek the privilege to study with them, and by continuous production in many fields of research. The Medical Center is indeed fortunate in having assembled such a competent professional staff.

The Pauline A. Hartford Memorial Chapel

During the year the Hospital welcomed the appointments of Reverend Philip M. Mulcahy, Catholic Chaplain and Rabbi Jeremiah J. Berman, Jewish Chaplain, both of whom with Reverend Lyman R. Hartley, Protestant Chaplain, minister to the spiritual needs of all at the Medical Center. Regularly scheduled weekly services are being held and are broadcast to our patients. Thus the chapel has become a sanctuary for prayer and meditation for everyone at the Medical Center.

Responsibilities and Opportunities

We shall ever be grateful to those who made the Medical Center possible.

Our Twenty-fifth Anniversary commemoration increased everyone's awareness of the growing interdependence of the many branches of medicine. The relationship of the physician, the hospital, the researcher, the nurses, and the technicians is no longer merely a close one—it is a stream of mutual integration around the central core of each health-conscious individual. It is this complete oneness that will make possible in the coming years health benefits of such magnitude that only the already apparent deepening sense of personal responsibility can underwrite.

The overall effect of the selfless cooperative effort of the more than 6,500 men and women—professional and non-professional staffs—gives us every confidence that Presbyterian Hospital and the Columbia-Presbyterian Medical Center will continue to enhance their leadership in the years to come.

Our methods and services have changed over the years; they will change perhaps more rapidly in the future, but our primary purposes and aims will always be "to secure the best attainable treatment of the sick and injured—to provide for medical education and research of the highest type."

CHARLES P. COOPER,
President.

February 8, 1954

Report of the Treasurer

EXHIBIT A

THE PRESBYTERIAN HO

BALANCE SHEET,

ASSETS

	December 31 1953	1952
ENDOWMENT FUNDS ASSETS:		
Investments:		
Bonds and stocks (approximate market quotation value—1953, $58,085,513)	$52,054,399	$51,709,126
Mortgages receivable, etc.	699,895	801,440
Cash	173,250	133,087
Total endowment funds assets	$52,927,544	$52,643,653
PLANT ASSETS:		
Property and equipment at original cost—see note 1 (less accumulated depreciation—1953, $10,815,000; 1952, $9,943,700)	$21,945,837	$22,386,214
Replacement Fund—Bonds and stocks (approximate market quotation value—1953, $517,022)	485,321	
Total plant assets	$22,431,158	$22,386,214
CURRENT FUNDS ASSETS:		
Investments—Bonds, etc. (approximate market quotation value—1953, $2,738,804)	$ 2,762,442	$ 3,000,577
Cash	240,399	83,906
Accounts receivable (less reserve—1953, $123,876; 1952, $160,610)	1,204,685	1,336,113
Supplies and materials	328,153	318,517
Interest accrued and dividends receivable	390,397	349,781
Prepaid insurance, etc.	70,688	10,505
Total current funds assets	$ 4,996,764	$ 5,099,399
Total	$80,355,466	$80,129,266

Notes:

(1) Effective January 1, 1953 the Hospital's policy with respect to property accounting was changed (a) to make provision for depreciation based upon estimated useful life of buildings and equipment and to fund depreciation on the basis of current provisions and (b) to capitalize additions to plant assets and to charge replacements to Replacement Funds. In addition, items of equipment previously charged to Appropriation for Property Repairs and Replacements during the years 1946 to 1952, inclusive, in the amount of $550,660 have been capitalized. In the above balance sheet Plant Assets and Plant Funds at December 31, 1952 have been decreased by $9,943,700, representing accumulated depreciation at that date.

EXHIBIT A

E CITY OF NEW YORK

1, 1953 AND 1952

FUNDS AND LIABILITIES

	December 31 1953	1952
ENDOWMENT FUNDS (Exhibits C and D)	$52,927,544	$52,643,653
PLANT FUNDS:		
Capital invested in property and equipment—see note 1	$21,945,837	$22,386,214
Replacement funds:		
Buildings	259,559	
Furniture, fixtures and equipment	225,762	
Total plant funds	$22,431,158	$22,386,214
CURRENT FUNDS AND LIABILITIES:		
General fund (Exhibit C)	$ 3,311,515	$ 4,254,403
Appropriation for property repairs and replacements—(Overexpended)		*821,807*
Special expendable funds (Exhibit C)	832,497	727,715
Undistributed income from endowments	96,656	32,040
Accounts payable	315,917	350,447
Patients' credit balances	82,411	71,723
Accrued payroll and other expenses	357,768	484,878
Total current funds and liabilities	$ 4,996,764	$ 5,099,399
Total	$80,355,466	$80,129,266

(2) The benefits under the Hospital's Group Retirement Plan are provided for by a contract with the Travelers Insurance Company and a Retirement Fund Trust. See page 30.

EXHIBIT B

The Presbyterian Hospital in the City of New York

STATEMENT OF INCOME

For the Years Ended December 31, 1953 and 1952

	Year Ended December 31 1953	1952
OPERATING INCOME:		
Care of patients	$10,931,905	$10,156,464
Other services	1,314,297	1,239,453
Total	$12,246,202	$11,395,917
Transfer from special expendable funds (Exhibit C):		
For research	328,143	331,191
For other designated purposes	260,091	299,531
Total operating income	$12,834,436	$12,026,639
OPERATING EXPENSES:		
Administration	$ 192,634	$ 176,435
Assistant Secretary-Treasurer	123,744	118,968
Comptroller	283,887	271,763
Public Interest	76,131	50,220
Convalescent Home	192,225	137,639
Non-Professional Services:		
Buildings and Grounds	1,931,237	1,763,210
Food Service	2,161,098	2,108,468
Personnel and Protective	198,526	192,631
Other Non-Professional Services	608,890	556,120
Professional Services:		
Nursing	4,156,793	3,723,918
Professional Staff, Doctors' Offices & Research	1,947,093	1,877,364
Vanderbilt Clinic & Ancillary Services	3,194,910	3,021,225
Provision for Depreciation:		
Buildings	258,600	(1) 795,000
Furniture, fixtures and equipment	612,700	
Total operating expenses	$15,938,468	$14,792,961
NET OPERATING LOSS	$ 3,104,032	$ 2,766,322
OTHER INCOME FOR GENERAL PURPOSES:		
Investment income	$ 2,129,526	$ 2,149,201
Contributions	605,414	501,228
	$ 2,734,940	$ 2,650,429
NET LOSS (charged to general fund—Exhibit C)	$ 369,092	$ 115,893

Notes:

(1) "Appropriation for Property Repairs and Replacements" in 1952.

(2) Certain 1952 items have been reclassified for comparative purposes.

EXHIBIT C

The Presbyterian Hospital in the City of New York

SUMMARY OF FUND CHANGES

For the Years Ended December 31, 1953 and 1952

	Year Ended December 31 *1953*	*1592*
ENDOWMENT FUNDS		
Balance, January 1	$52,643,653	$51,589,814
Add:		
Legacies and contributions	$ 104,532	$ 297,575
Gain from disposal of investments	127,109	746,264
Transfers from:		
Special expendable funds	52,250	
General fund		10,000
	$ 283,891	$ 1,053,839
Balance, December 31	$52,927,544	$52,643,653
GENERAL FUND		
Balance, January 1	$ 4,254,403	$ 4,396,873
Add:		
Unrestricted legacies	$ 91,912	$ 158,933
Gain from disposal of investments	3,583	113
	$ 95,495	$ 159,046
Total	$ 4,349,898	$ 4,555,919
Deduct:		
Net loss (Exhibit B)	$ 369,092	$ 115,893
Expenditures for property and equipment	669,291	175,623
Transfer to endowment fund		10,000
	$ 1,038,383	$ 301,516
Balance, December 31	$ 3,311,515	$ 4,254,403
SPECIAL EXPENDABLE FUNDS		
Balance, January 1	$ 727,715	$ 790,473
Add:		
Legacies and contributions	$ 476,509	$ 1,011,562
Investment and other income	391,401	383,532
	$ 867,910	$ 1,395,094
Total	$ 1,595,625	$ 2,185,567
Deduct:		
Transfers to:		
Operating income (Exhibit B)	$ 588,234	$ 630,722
Endowment funds	52,250	
Expenditures for property and equipment	16,294	730,663
Miscellaneous	106,350	96,467
	$ 763,128	$ 1,457,852
Balance, December 31	$ 832,497	$ 727,715

EXHIBIT D

The Presbyterian Hospital in the City of New York

ENDOWMENT FUNDS, DECEMBER 31, 1953

THE PRESBYTERIAN HOSPITAL:

Anonymous	$ 625,926.00
Arnstein, Daniel G.	50,000.00
Baker, Mrs. Frederick, Pathological Department	8,500.00
Briddon, C. K., Gold Medal	2,558.80
Brookman, Henry D.	50,000.00
Cary, Caroline Catherine	50,000.00
Coakley, Cornelius G., Trust	38,900.00
Colgate, Hannah, Memorial	60,794.38
Collins, Perry McDonough	548,999.31
Columbia University for Vanderbilt Clinic and Sloane Hospital	1,400,000.00
Cook, William W.	119,497.70
Cragin Fund	68,818.56
Davis, Isabel G.	568,985.36
Delano, Moreau	4,000.00
Dodge, The Cleveland H.	310,500.00
Dortic Memorial	99,024.11
Dows, Mrs. David	7,700.00
Dows, Margaret E.	5,360.25
Educational and Scientific Work	285,527.50
Eichner, Joseph Herman and Hannah, in Memory of	8,575.87
Eidlitz, Otto M.	415,271.50
Endowed Bed	1,678,063.19
Endowed Bed—Research	107,751.16
Faulkner, The Edward Daniels, Memorial for the Study and Treatment of Arthritis	100,000.00
Fiske Fund	104,236.20
FitzGerald, Frederick H. and Josephine F.	141,362.49
Flagler, Alice Manderlick	250,141.64
Foote, Edwin Bancroft	175,948.87
Ford, George W. and Eliza Lawson	330,911.11
General Endowment	261,884.42
Goldschmidt, Henry Philip	5,000.00
Gondran, Sophie M. and Adolph L.	100,000.00
Griffith, Griffith W. and Mary Jones, Memorial	1,309,087.00
Haller, Maria L.	2,609.29
Harkness, Edward S.	6,188,794.01
Harkness, Edward S., Memorial	14,000,000.00
Harkness, Edward S., Research	500,000.00
Harkness, Mary Stillman, Memorial Endowment	250,000.00
Harkness, The Mary S., for Convalescent Care	1,003,044.97
Hartford, The John A., Foundation	300,000.00
Hill, Marguerite S.	5,500.00
Institute of Ophthalmology, The	3,412,942.00
Jesup, Morris K. and Maria DeWitt	100,000.00
Jones, David, Memorial	300,000.00
Jones, Margarette A.	166,255.33
Keller Memorial	500.00

ENDOWMENT FUNDS, DECEMBER 31, 1953

The Presbyterian Hospital *(Continued)*

Kennedy, John Stewart	$1,828,698.68	
Kinnicutt, The G. Herman, Flower	5,000.00	
Knapp, The Herman, Memorial Eye Hospital Endowed Bed	60,375.00	
MacMillin, Isabel, Memorial	1,285,562.73	
Martin, Frederick Townsend	10,000.00	
Maxwell, Anna C., Memorial Library	5,975.65	
McCosh, Dr. Andrew J., Memorial	100,192.10	
McCready, Jeanne Campbell	106,529.11	
McGuire, Mary Madison	259,006.25	
Medical Scientific	317,225.55	
Ottman, for Cancer Research	20,000.00	
Quick, The Walter R.	14,943.00	
Room "J" Trust	5,294.00	
Sage, Dean, Memorial	28,253.26	
Sage, Dean, Scholarship	5,000.00	
Sage, Russell and Margaret Olivia, Memorial	878,187.55	
School of Nursing	189,533.06	
Sherry, The Bertha, Memorial	653,400.76	
Sidman Trust	1,072.05	
Sloane Hospital	783,257.26	
Sloane Hospital Babies' Alumni	16,511.86	
Sloane Hospital Research	25,000.00	
Squier Clinic	113,635.90	
Stilson, Ellen J. and Minnie	18,000.00	
Surgical Fellowship	60,000.00	
Terry, John T., in Memory of	40,767.35	
Tod, J. Kennedy, Memorial	100,102.29	
Tolfree, The Caroline O. and James E., Memorial	157,370.21	
Valentine, Isaac E., Memorial	563,227.20	
Van Norden, Kathryn L.	2,609.29	
Vanderbilt Clinic	156,805.93	
Weinman, Moses	5,360.25	
Welles, Frances Swan	10,000.00	
Wheeler, The Dr. John M., Memorial	73,791.09	
Williams, William	342,658.48	
		$43,766,316.88

ENDOWMENT FUNDS, DECEMBER 31, 1953

The Babies Hospital:		
Cleft Palate Cases	$ 1,000.00	
Cribside Social Service Committee	12,828.57	
Educational Therapy	1,000.00	
Eichner, Joseph Herman and Hannah, in Memory of	8,575.87	
Endowed Bed	5,000.00	
Harkness, Edward S., Educational and Scientific	600,000.00	
Harkness, Edward S.	1,199,775.00	
Harkness, Mary Stillman, Memorial Endowment	250,000.00	
Kimball, Reuel B.	57,737.58	
Rathbone, R. Bleecker	15,000.00	
Rumson Fund	20,469.78	
Videre, Leontine, Foundation	9,976.47	
		2,181,363.27
Neurological Institute:		
Blair Memorial	$ 3,126.64	
Endowed Bed—Research	100,000.00	
Ogilvie, Clinton, Memorial	9,970.00	
		113,096.64
New York Orthopaedic Dispensary and Hospital:		
Bridgman, Statira	$ 2,500.00	
Endowed Bed	598,842.80	
Farrell, Dr. Benjamin P., in Memory of	6,981.00	
General Endowment	333,259.21	
Hibbs, Russell A., Memorial Library	36,067.97	
Hurst, The Thomas D. and Kate	5,000.00	
Kane, Annie C., Fellowship	1,000,000.00	
Rathbone, R. Bleecker	15,000.00	
Tower, Mary T., in Memory of	30,568.85	
Watson, Emily A.	2,502,256.56	
White, Emily Vanderbilt	20,000.00	
Willard, Mary Livingston	5,000.00	
		5,055,476.39
Gain from Disposal of Endowment Fund Investments since November 1, 1946		1,811,290.79
Total Endowment Funds		$52,927,543.97

ACCOUNTANTS' CERTIFICATE

The Presbyterian Hospital
in the City of New York:

We have examined the balance sheet and supporting schedule of endowment funds of The Presbyterian Hospital in the City of New York as of December 31, 1953 and the related statement of income and summary of fund changes for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying balance sheet and schedule of endowment funds and the statement of income and summary of fund changes, with the footnotes thereon, present fairly the financial position of the Hospital at December 31, 1953 and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year, except for changes with respect to property accounting as set forth in Footnote 1 to the balance sheet, which changes we approve.

Haskins & Sells
Certified Public Accountants

New York
January 26, 1954.

REPORT OF THE AUDITING COMMITTEE

To the Board of Trustees of The Presbyterian Hospital
in the City of New York:

Pursuant to Article VII of the By-Laws of The Presbyterian Hospital in the City of New York, the undersigned Auditing Committee appointed by your Board has chosen, with your approval, the firm of Haskins & Sells, as independent certified public accountants, to make an examination of the books and accounts of The Presbyterian Hospital in the City of New York for the fiscal year 1953.

We submit herewith, after due consideration by this Committee, a certificate of Messrs. Haskins & Sells dated January 26, 1954 relating to the Corporation's balance sheet and schedule of endowment funds as of December 31, 1953 and related statement of income and summary of fund changes for the year then ended, as reflecting the results of a satisfactory examination of the said books, accounts, cash and securities. Your Committee recommends that the Certificate and financial statements be accepted and approved.

William Hale Harkness, *Chairman*
J. W. Hornor
Thatcher M. Brown, Jr.
Auditing Committee

New York
January 26, 1954.

EXHIBIT E

GROUP RETIREMENT PLAN ESTABLISHED BY THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

The retirement benefits provided by the Hospital under its Group Retirement Plan are partly provided by a Trust Fund established with the Guaranty Trust Company of New York and partly insured by the Travelers Insurance Company. The amounts set aside for retirement benefit purposes, which are not part of the assets of the Hospital, aggregated $3,139,500 at December 31, 1953. In accordance with the Hospital's undertaking under the Group Retirement Plan the amounts already set aside are sufficient to provide for all retirement benefits to which employees now retired and employees now eligible to retire at their own request are or would upon retirement be entitled under the Plan. In addition, they include provision for that portion of future retirement benefits to employees not now eligible for retirement at their own request, which has been funded through December 31, 1953 under the systematic program followed by the Hospital in financing such benefits.

Following is the Trustee's report for the year ended December 31, 1953 of the Retirement Fund Trust established by the Hospital:

Assets in Fund—January 1, 1953	$ 751,713
Payments to Fund	142,167
Net Income from Investments including Net Profit on Investments Disposed of	32,187
	$ 926,067
Disbursements for Retirement Benefits	51,867
Assets in Fund—December 31, 1953	$ 874,200

	*Book Value**
Consisting of:	
U. S. Government Obligations	$ 39,052
Industrial, Railroad & Public Utility Bonds	537,014
Preferred Stocks	81,044
Common Stocks	208,609
Cash	8,481
	$ 874,200

* Bonds are shown on amortized basis, stocks are shown at cost. The cash and approximate market value of the securities held as of December 31, 1953 totaled $900,171.

GUARANTY TRUST COMPANY OF NEW YORK,
Trustee

By WILLIAM F. LACKMAN
Second Vice-President

Following is a summary of the Retirement Fund Trust and the Travelers Insurance Company reserves at December 31, 1953:

Retirement Fund Trust—Guaranty Trust Company of New York, Trustee	$ 874,200
Travelers Insurance Company Reserve for Annuities Purchased	2,265,300
Total	$3,139,500

Reports of Services

ANESTHESIOLOGY

E. M. Papper, M.D., *Director*

Dr. Arnold Gesell stated in one of his books that "The most basic and dramatic phases of development are concentrated in the first five years of life. The outward manifestations of early mental growth are remarkably patterned and lawful". Although these statements were made as commentary on human growth and development they seem appropriate to the growth of a new service in the Presbyterian Hospital, now completing its second year. The first two years of the Anesthesiology Service have been dramatic in many aspects, possibly basic in some, and it is hoped will maintain a lawful mental growth for the future.

This early growth period was also characterized by change. Change in some respects is more tempestuous in youth than is the case in later developmental periods. This has been true for the Anesthesiology Service. Some of our staff have left to assume positions of increased responsibility in other institutions. These have been a source of both pride and regret to the Service. During 1953 six members of the Attending Staff have resigned for a variety of reasons. Dr. William S. Howland has assumed the Directorship of the Department of Anesthesiology at the Memorial Hospital in New York. Dr. Daniel P. Tausig has entered private practice and has become Director of the Anesthesiology Service at the North Shore Community Hospital in Manhasset, New York. Drs. Robert C. Peterson and Beatrice T. Gilbert have resigned to enter the private practice of Anesthesiology. Drs. Edgar C. Hanks and Frederick W. Hehre, Jr. have entered the Army of the United States on military leave of absence. The dislocation attendant upon the loss of 40 per cent of the Attending Staff has been softened in large part by the addition to the Attending Staff of Drs. Carter M. Ballinger, Ernest Salanitre and Marilyn M. Kritchman from the Residency Staff of the Presbyterian Hospital and by the addition of Drs. Lester C. Mark and Johannes Bartels from other institutions. Promotions on the staff have consisted of Drs. M. Jack Frumin, Edgar C. Hanks, Frederick W. Hehre, Jr. and Beatrice L. Selvin from Assistant Anesthesiologist to Assistant Attending Anesthesiologist.

There were several new developments in 1953 which were designed to improve patient care. It has been recognized and accepted by the Services concerned with the care of surgical patients, that prescribing preanesthetic medication for patients scheduled for operation with anesthetic methods other than those of local infiltration, is the proper

function of the Anesthesiology Service.

Serious and successful attempts to improve the organization of patient care in the operating and recovery rooms have progressed satisfactorily because of the combined efforts of the Directors of the Surgical Services, the Nursing Department, the Administration, and the Anesthesiology Service. Together, we have attempted to establish procedures which will serve to make the professional and physical management of operative cases expeditious and more efficient. A continuing analysis of our own practices in the operating and recovery rooms has been undertaken and comparisons made with the practices in several large institutions elsewhere. These studies have suggested several changes in our methods. Some have been effected during 1953, others are to be tried during 1954.

Anesthetic equipment has also been enlarged somewhat to include the more frequent use of mechanical ventilators during general anesthesia. This practice originated as a research technique and has become an accepted clinical practice for certain types of operative cases.

The residency training program has been strengthened by an increased emphasis upon "bed side" teaching in the operating rooms, by an intensive indoctrination course for beginners in the residency during their first two months of training, and by the development of a Manual of useful and important information for the Resident Staff by Drs. Howland, Herman Schwartz and Shih-Hsun Ngai. These practices are additions to the teaching activities described in previous annual reports.

Clinical Anesthesia

As of October 31, 396 therapeutic and diagnostic nerve blocks were performed. The volume of clinical anesthesia has increased during 1953 to a total of 19,017 cases on October 31. The mortality from anesthesia continues at a low level being approximately 1 in 3,300 anesthesias, as compared with a national survey of 1 in 1,560 reported from 10 leading University Hospitals. Efforts are constantly in progress to reduce the mortality still further.

During 1953, sixty papers were presented by the staff and twenty-two papers were published or are in press. These presentations were made to the societies traditionally devoted to anesthesiological subjects and to societies of basic science orientation related to our field. Among the presentations were active participation in the Twenty-fifth Anniversary celebration of the Columbia-Presbyterian Medical Center. At these meetings four scientific papers were presented by members of the staff and one staff member

was a co-exhibitor. A member of the Anesthesiology Service also participated in one of the panels.

Responsible positions were held by several members of the Attending Staff on committees of the American Board of Anesthesiology, the Section on Anesthesia of the American Medical Association, the American Society of Anesthesiologists, the Subcommittee on Anesthesia of the National Research Council, the New York State Society of Anesthesiologists, and two military organizations. A radio address for the laity under the auspices of the National Tuberculosis Association was made by Dr. Emanuel M. Papper. Dr. Papper was a guest speaker at the Western Conference of Anesthesiology in Los Angeles. He served as one of the founders of the new Association of University Anesthetists. Drs. Virginia Apgar and Duncan A. Holaday were subsequently elected to membership in the new Association. The Anesthesiology Service was pleased also to act as host for a meeting of investigators on problems of resuscitation for the Armed Forces. During 1953 the Anesthesiology Service was signally honored by Dr. Apgar's service as a distinguished foreign lecturer in Anesthesiology to the Commonwealths of Australia and New Zealand.

Research Projects

Many of the research projects undertaken in Anesthesiology are carried out jointly with the facilities of the College of Physicians and Surgeons. Much of the laboratory space used for the prosecution of these studies was made available in the College through the cooperation of Dr. George H. Humphreys, II, Director of the Surgical Service, and Dr. S. C. Wang of the Department of Physiology.

Dr. Holaday, in a preliminary study of respiratory dynamics during anesthesia, demonstrated with Dr. S. Louis Carpenter that the work required to ventilate anesthetized patients varied greatly from patient to patient and also from time to time in the same patient. Drs. Holaday and Carpenter further observed that much of the work performed in imposing pressures aiding respiration was not necessarily transferred into gas flow and therefore, constituted an unnecessary encumbrance to the circulation. The factors which contributed to these effects were studied. Further observations in this field of respiratory physiology during anesthesia are in progress.

Dr. Holaday continued his development of micromanometric methods for the analysis of blood gases by applying the principles of the Goldstein method to the Kopp-Natelson microgasometer, and his studies in the alterations of acid base balance during anesthesia have been extended

to an analysis of the changes of electrolytes, pH, and bicarbonate content of the tissues of animals in response to alterations of the carbon dioxide tension in the blood.

The studies in respiratory dynamics carried on by Dr. Holaday and other members of the staff of the Anesthesiology Service have reached the point where it is necessary to acquire a special instrument which will make it possible to record pressure flows and gas volumes during the course of a predetermined fixed pattern of respiration during anesthesia. The design and construction of this special instrument, which has other features of potentially significant use in research, is being completed in collaboration with Dr. John Gilroy, a physicist with the Ohio Chemical Company.

Dr. Holaday has also begun work on the design of a continuous flow glass electrode pH meter; and with Dr. Edward K. Williams of the Medical Service a study of the usefulness of the exsufflator in the immediate postoperative period for the clearing of secretions from the respiratory tract and for the improvement of respiratory efficiency.

Dr. Apgar has continued her studies on ventilation of the newborn. With Dr. Richard L. Day, of the Pediatrics Service, Dr. Apgar has applied the experimentally developed principle of relatively high positive pressures of extremely short duration for the resuscitation of the newborn. Thus far the application of this method has failed to expand atelectatic lungs in the newborn in approximately half of the attempts. Further studies are in progress to attempt to improve this ratio. Dr. Apgar is also engaged in studies of resistance and gas flow in different types of endotracheal tubes commonly used in infant resuscitation. Together with Dr. William A. Silverman of the Pediatrics Service, Dr. Apgar is studying the clinical importance of chest retraction in the premature infant. She and Dr. Silverman are also engaged in modifying X-ray devices calculated to produce more valuable X-rays of the lungs of the newborn. Dr. Apgar has correlated the study of arterial oxygenation in the newborn begun some years ago. There appeared to be no significant correlation of heel blood oxygen (arterial oxygen) of the newborn with the development of subsequent intelligence in early childhood as measured by several standard intelligence tests and these implications are being examined. Dr. Apgar has begun a controlled study of N-allyl-normorphine as an analgesic drug during labor.

Dr. Ngai has continued his studies of the function of the respiratory centers with Dr. Wang, Dr. Holaday, and Messrs. Kurt Cohen and Edgar Haber, medical students at the College of Physicians and Surgeons. These workers are attempting to localize the neural mechanism of gasping to

gain further understanding of the neural regulation of respiration. Further observations are needed before their conclusions can be established firmly. Dr. Ngai studied with Dr. Wang the hypotensive action of the veratrum alkaloids. Particular attention was paid to the mechanism of the extravagal hypotension resulting from the administration of these drugs. Dr. Ngai has continued the joint studies of the physiology of the carotid baroceptors with Dr. Wang. Also they have continued their observations on the respiratory characteristics of pontile and medullary cats.

With Dr. Eleanor C. Nelson of the Anesthesiology Service, Dr. Ngai studied the blood flow through the internal carotid and occipital arteries before and during hexamethonium induced hypotension in the animal. They found that when the mean arterial pressure was reduced below 90 mm. Hg the rate of cerebral blood flow became a direct function of the arterial pressure. Hemorrhage further reduced the cerebral blood flow.

Dr. Frumin and Dr. Schwartz with Drs. John J. Burns and Bernard B. Brodie of the National Heart Institute have established that procaine passes into the subarachnoid space across the dura mater following peridural deposition of the drug. These workers have also demonstrated in peridural and spinal anesthesia when small doses of procaine are used, that the first area of blockade is the dorsal root ganglion. This structure appears to be the most sensitive to threshold spinal or peridural anesthesia. Dr. Frumin has undertaken an investigation of succinylcholine, a new transient muscle relaxant.

Dr. Bernard Raymond Fink studied the phenomenon of post-anesthetic anoxia. He has also designed a new non-rebreathing valve which facilitates assistance and control of respiration in non-rebreathing circuits. This is of particular advantage in pediatric anesthesia. Dr. Fink is currently studying the conditions during which inflation of the stomach and regurgitation of gastric contents may occur during inhalation anesthesia. His experimental approach is the correlating of imposed pressures on the airway which may also result in inflation of the stomach and subsequent regurgitation.

Dr. Schwartz has continued his studies on cyclopropane in defining the relationship of acid base to cardiovascular changes. This work has been done in association with Drs. Frumin, Ballinger and Holaday.

Dr. Herbert Rackow, in collaboration with Dr. James B. Campbell of the Neurological Surgery Service and Dr. John N. Robinson of the Urological Service, has carried on a study of the innervation of the genitourinary system with the aid of regional nerve block and cystometric and radiological studies of the bladder, ureter and kidney pelvis. Dr. Rackow

has also studied the action of the true vocal cords during spontaneous inspiration and expiration in light and deep levels of anesthesia.

Dr. Kritchman has begun a study of the psychodynamic factors associated with the anesthetic experience in collaboration with Drs. Edward Hornick and Harvey Corman of the Psychosomatic Section of the Department of Psychiatry.

Prior to his leaving for military service Dr. Hanks completed another section of his clinical study on the long term effects upon patients after cardiac arrest during anesthesia and operation, concluding that the large majority of patients who have survived this catastrophe have gone on satisfactorily to lead normal and useful lives. Some of these patients have had subsequent anesthesia and surgery without ill effect.

Dr. Hehre concluded preliminary studies on the problems of hemorrhage and its relationship to the selection of anesthetic agents and methods.

Dr. Howland with Dr. Nelson and Drs. Ralph A. Deterling, Jr. and Shivaji B. Bhonslay of the Surgical Service have carried on experimental studies of induced hypothermia and its application to clinical anesthesia and surgery.

Dr. Papper continued his studies on renal function during anesthesia with Drs. Stanley E. Bradley and Edgar Leifer of the Medical Service, and Dr. David V. Habif of the Surgical Service. Dr. Papper also continued his studies with Drs. Arthur H. Blakemore, Deterling, Samuel R. Powers and Hugh Fitzpatrick of the Surgical Service on the influence of anesthesia and operation upon patients with acquired and congenital heart diseases. It was clearly established in surgical manipulation of the heart, that the use of procaine upon the heart or intravenously was fraught with the dangers of hypotension and tachycardia. This drug was not effective in preventing arrhythmias. Dr. Papper has concluded his studies of the short acting barbiturates with Drs. Burns and Brodie of the National Heart Institute and Dr. Peterson of the Anesthesiology Service. It became abundantly clear that the discovery or synthesis of a barbiturate that was truly rapidly destroyed without significant localization in tissues was unlikely.

The investigations described were carried on, in most instances, jointly with the facilities of the College of Physicians and Surgeons. They were made possible through the kind generosity of Mr. Charles B. Wrightsman, Burroughs Wellcome & Co. Inc., Abbott Laboratories, and Ohio Chemical & Surgical Equipment Co. in their grants to the Anesthesiology Service of the Presbyterian Hospital; and, by grants to the Department of Anesthesiology of the College of Physicians and Surgeons by the National Institutes of Health, the National Tuberculosis Association, and The Squibb Institute

for Medical Research. We are deeply indebted to these donors for making possible our investigations in anesthesiology.

Future Plans

A serious problem in the planning for the future is that the future becomes the present so quickly. This telescoping of time appears to be more acute in the life history of a youthful service than it is in one that is traditionally well established for many years. The Director of the Service is deeply indebted to the kind collaboration of his professional colleagues for assistance in planning the development of the Anesthesiology Service. He is equally and profoundly indebted to the Administration and the Trustees for their sympathetic understanding and cooperation in helping to evolve this Service in the proper direction.

The extensive turnover of the Attending Staff which was described earlier in this report and the definite increase in the clinical responsibilities of the Service has presented a large problem. In the last few years, the anesthetic care of patients has increased on the average from 5 to 10 per cent annually.

With the sympathetic cooperation of the Administration, it is hoped that formulae for the achievement of the goals of the Anesthesiology Service will be found to effect the continued strengthening of patient care, education of house officers and students, and research in Anesthesiology.

DERMATOLOGY

CARL T. NELSON, M.D., *Director*

During 1953, 6,382 new patients were seen by the Dermatological Service of Vanderbilt Clinic, and 29,114 return visits were made. There were 103 admissions to the Dermatological Service in Presbyterian Hospital, and 828 patients were seen in consultation with other services. The Division of Mycology examined 3,764 specimens, including 833 from hospitalized patients, and the serological research laboratory performed 1,762 special treponemal immobilization tests for individuals admitted to the various clinics and departments of the Medical Center. These data afford some measure of the services provided in an average year by the Dermatological Service of the Presbyterian Hospital.

Since the establishment of the Columbia-Presbyterian Medical Center twenty-five years ago, the Dermatological Service has functioned primarily as an out-patient and consultation service without ward beds, specialized treatment facilities, or office space of its own within Presbyterian Hospital. Six beds provided through the courtesy of the Medical Service have been available for the treatment of patients unable to continue on an ambulatory status. Of necessity, these have served as emergency beds and have not permitted the selection of patients on the basis of research or teaching value. This continued lack of an integrated dermatological ward unit not only seriously hampers clinical investigation and the instruction of medical students, but also renders virtually impossible the systematic training of house staff and nurses in the care of the dermatological patient. Considering that nearly ten per cent of the patients coming to this institution for treatment do so because of dermatological diseases, it is gratifying to know that there is now a prospect that these long-standing deficiencies may be corrected in the near future. When they are, the Dermatological Service will then realize its full potentialities as an integral part of the Columbia-Presbyterian Medical Center.

During the past year Dr. Anthony N. Domonkos was promoted from Assistant Dermatologist to Assistant Attending Dermatologist in the Vanderbilt Clinic. Drs. Arlington Bensel and Theodore J. Michelfelder were appointed Assistant Dermatologists in Vanderbilt Clinic. Dr. Ralph W. Grover resigned as Assistant Dermatologist.

Several distinguished physicians were visitors to the Dermatological Service during 1953. These included Dr. Lemuel P. Ereaux, Montreal;

Dr. Louis Forman, London; Dr. Oscar Gilje, Oslo; Dr. Bjork Heilesen, Copenhagen; Dr. P. N. Rangiah, Madras; and Dr. Katri E. Rehtijarvi, Helsinki. The visits of colleagues from other institutions, in this country and abroad, are welcomed by the Service. These occasions not only enable the visitors to observe our methods of research, teaching and therapy, but also permit an interchange of ideas which are stimulating and instructive for the staff.

Fourteen papers and articles were published by members of the Dermatological Service in 1953. The staff also continued its active participation in the proceedings of local and national dermatological organizations. Scientific presentations were given at various meetings during the year by Drs. George C. Andrews, Leslie P. Barker, Rhoda W. Benham, Harvey Blank, Helen O. Curth, Anthony N. Domonkos, Eugene F. Kelley, Beatrice M. Kesten, J. Lowry Miller, Carl T. Nelson, Margarita Silva and Meyer H. Slatkin. These included presentations at the meetings of the American Medical Association, the American Academy of Dermatology and Syphilology, the Society for Investigative Dermatology, and other organizations devoted to laboratory and clinical interests. Dr. Paul Gross attended the Congress of the German Dermatological Association held in Frankfurt in September 1953, and also visited clinics in Copenhagen, London, Zurich, and Naples. Dr. Andrews was elected Vice-President of the American Dermatological Association, and Dr. Miller is currently Chairman of the Section of Dermatology and Syphilology of the New York Academy of Medicine. Dr. Harvey Blank was appointed a member of the Subcommittee on Foot Protection of the National Research Council.

Seven exhibits were presented by members of the Service of the Hospital and the Department of Dermatology of the Medical School on the occasion of the Twenty-fifth Anniversary of the Medical Center. Dr. Slatkin was in charge of the arrangements for these exhibits which included: Behcet's Syndrome — Aphthosis, by Dr. Helen O. Curth; Dermatophytes — Effect of Nutrition on Morphology, Pigment Production and Taxonomy; and Fungous Infections of Man, by Drs. Benham and Silva, and Miss Elizabeth Leonard; Precanceroses and Cutaneous Malignancy; and Syphilis, by Drs. Andrews, Domonkos, Wilbur D. Hurlbut and Marvin Brodey; Treponemal Immobilization Test: Clinical Application, by Drs. Miller, Slatkin, Brodey and Harry L. Wechsler; and Treponema Pallidum Immobilization Test for Syphilis, by Dr. Justina H. Hill.

The research projects undertaken by the members of the Dermatolo-

gical Service during 1953 covered a wide range of interests. Dr. Andrews and his associates have continued their long-term clinical study of patients treated for cutaneous malignancy by X-ray. Working with Dr. Domonkos, Dr. Andrews has also investigated the association of certain types of hemangiomas with retrolental fibroplasia. Dr. Barker, Dr. Nelson, and Dr. Edward W. Wilson in collaboration with Dr. Frank E. Cormia of the New York Hospital and Dr. Maurice J. Costello of Bellevue Hospital, completed a study on the use of isonicotinic acid derivatives in the treatment of tuberculosis of the skin.

Drs. Benham and Silva, supported by a grant made to the Department of Dermatology of the Medical School by the U. S. Public Health Service, continued their investigation of the nutritional requirements of the dermatophytes. The facilities of the Division of Mycology of Vanderbilt Clinic have afforded an opportunity for a detailed comparative study of the cultural characteristics of the fungi isolated from a wide variety of clinical infections. Dr. Brodey and Mrs. Julia M. Einbinder have been studying the abnormalities in plasma electrophoretic patterns of the asymptomatic parents of patients with disseminated lupus erythematosus.

Dr. Helen Curth has continued studies on the association of acanthosis nigricans with cancer. This work, which is supported by a grant made to the Medical School by the U.S. Public Health Service, has been extended to include analyses of the genetic relationships observed in acanthosis nigricans and investigations of the histological characteristics of the tumors associated with this disease. Dr. Domonkos has completed his study of the threshold erythema dose of low voltage X-rays. The results of this work are now ready for publication.

Dr. Gross and Dr. Milton B. Sloane are extending the study of the pH and alkali neutralizing properties of the skin in nummular eczema and dermatoses of occupational origin. A special clinic has been established for these investigations and a similar study has been undertaken simultaneously at the U.S. Public Health Service Hospital, Staten Island, in collaboration with Drs. Benjamin J. Chester and Milo O. Blade. Dr. Kesten has continued the study of the physical factors related to light sensitivity in various dermatoses and has also extended the appraisal of methods for the treatment of onychomycosis.

Drs. Miller, Slatkin, Brodey, Wechsler and Hill, aided by a grant to the Medical School, from the Division of Venereal Diseases, U. S. Public Health Service, and the Department of Health of the State of New York, have continued their studies on the specificity of the treponemal immobi-

lization test and its value in excluding the diagnosis of syphilis in biological false positive reactions to standard serological tests for this disease. Additional data have been obtained on the incidence and significance of biological false positive reactions in clinic and hospital patients. Further studies on the transfer of the immobilizing antibody and its persistence in babies of syphilitic mothers were also completed. Dr. Miller, in collaboration with Miss Balbina Johnson of the Department of Surgery and Dr. Royal G. Jennings, also studied the value of erythromycin and a combination of erythromycin and neomycin in the treatment of pyogenic infections of the skin.

Dr. Wilson, with Drs. Nelson and Wechsler and Mrs. Einbinder, continued the study of protein metabolism in psoriasis and its relationship to the abnormal keratinization encountered in this disease. Dr. Joseph S. Shapiro has initiated a study of methods for selectively epilating fungus-infected hairs by the local application of chemical agents. Although this procedure facilitates the epilation of infected hairs, its effectiveness in the treatment of ringworm of the scalp has not yet been established.

In conclusion, it is a pleasure to extend my sincere thanks to the professional staff, and to the nursing and administrative staffs for their cooperation and assistance throughout the year. The Dermatological Service also gratefully acknowledges the generous and continued support received during 1953 from gifts to the Department of Dermatology of the Medical School by Eli Lilly and Company, the A. H. Robins Company, Colonel Willard F. Rockwell and a loyal friend. These benefactors have helped us greatly in financing our research projects.

MEDICINE

Robert F. Loeb, M.D., *Director*

In 1924, a mere handful of private practice offices were established by the Board of Managers of the old hospital to assist "former full-time men to establish themselves in private practice." This came about through the fact that even then certain men making notable contributions to teaching, research and patient care found it impossible for economic reasons to remain on a rigid full-time basis. It was felt then that by virtue of their proven academic qualifications they could continue to play an important role in teaching and patient care, although it was recognized that sustained efforts at significant investigation would in most instances not be maintained.

When the Medical Center was opened in 1928 a considerable expansion of private office space was provided to meet three needs. First, to provide for the inclusion of members of the numerous services added to medicine and surgery; second, to provide space for part-time men with offices downtown to see "casual" patients during the hours they were at the Medical Center discharging responsibilities for teaching and medical care; and third, to provide space for a few venturesome practicing members of the staff who at that time decided to give up outside offices and embark on a "geographic" full-time basis. At the close of the war, it proved impossible for returning members of the staff to find office space in the city and the Trustees took cognizance of the fact that this brought about an "urgent need to provide temporary Doctors' Private Practice Offices for members of the staff returning from the Services." Twenty-one of these "temporary" suites were provided on the fourth floor of the Presbyterian Hospital. Since then only a few members of the staff who undertook the use of this space have again opened offices outside. Indeed, whereas the idea of "geographic" full-time was considered "venturesome" twenty-five years ago, an acute problem has arisen because the majority of men finishing their training are today desirous of contributing a large amount of their time to the Medical Center for teaching and patient care in return for the privilege of having their sole private practice office at the Center. It is obvious that granting these opportunities to graduates of the various services each year, would in the very near future "choke" the facilities for years to come and defeat the purpose for which the offices were first established. This difficulty could be met by continuing to add to private office space. This would unquestionably be a serious mistake for by this process the very nature of

the Medical Center would in time be changed from that of a University Hospital, in which the size of the staff should be determined by the number of students, the ward beds and clinic responsibilities, to that of a large group practice clinic which would overshadow the primary functions of the Medical Center.

In the Medical Service a general working policy has recently been evolved to meet the problem posed. It is still felt that the highest priority for "geographic" full-time offices should be extended to outstanding members of the full-time staff who after years of financial sacrifice find it economically impossible to continue this privation and who by virtue of their background give assurance of their pedagogic and clinical potential. Selected members of the staff completing residency training or other advanced training will be given limited hours in the Doctors' Private Offices for a period of two years during which time they will devote in excess of half their time for teaching, research and clinical duties. They will then be required to find office space outside of the Medical Center except for "casual" hours in the Doctors' Private Offices as a convenience. A small group of physicians intermediate to those described above and who carry time-consuming responsibilities such as the Personnel Clinic and Student Health Clinics will not be required to have outside offices. There must be flexibility in any set of general rules and there will rightly arise from time to time in the Doctors' Private Offices exceptions to their application. However, it is hoped that the principles laid down may prove both helpful and fair in the resolution of a rapidly growing problem in the Medical Center.

The Medical Service is deeply indebted to Drs. Edgar Stillman, John M. Baldwin, Jr., Stuart W. Cosgriff and Richard B. Duane, Jr. as well as to the Presbyterian Hospital Alumni Association for the presentation of valuable current journals and books to the small reading and study room for members of the Medical House Staff on the 8th floor. Thanks are also due to Drs. Franklin M. Hanger, James E. McCormack, Kermit L. Pines and other members of the Medical Service whose tireless efforts contributed significantly to the success of the Twenty-Fifth Anniversary.

As in the past, notable distinctions have come to members of the Medical Service. Dr. Franklin M. Hanger has been elected President of the American Association for the Study of Liver Disease and is Chairman of the Committee on Education of The New York Academy of Medicine. Dr. Michael Heidelberger was the recipient of a Lasker Award for his contribution in immunochemistry. He also shared an award from the Belgian Government for his part in the discovery of Tryparsamide, a cure

for African sleeping sickness, and was made an Officer of the Order of Leopold II. He was re-elected Chairman of the Council of the Public Health Research Institute of New York. Drs. Stanley E. Bradley, Marcel Goldenberg, George A. Perera, John V. Taggart and Joseph C. Turner participated as guests at Ciba Foundation conferences in London and Dr. Bradley delivered a number of lectures in Holland and in British universities. Dr. Perera addressed the "1942 Club" of British Professors of Medicine at Cambridge. Dr. Perera was elected a member of the Board of Directors of the New York Heart Association and Chairman of the Section on Medicine of The New York Academy of Medicine. Dr. Alfred Gellhorn was elected to the Board of Directors of the American Association for Cancer Research. He is also Chairman of the Pharmacology and Experimental Therapeutics Study Section of the National Institutes of Health and was Chairman of the Gordon Research Conference on Cancer. Dr. Irving M. London delivered the Alpha Omega Alpha lecture at Yale University and was the recipient of the Theobald Smith Award of the American Association for the Advancement of Science. Dr. Robert L. Levy was made President of the American Clinical and Climatological Association and he was elected Vice-President of the Johns Hopkins Medical and Surgical Association and Consultant Cardiologist to the New York State Department of Health. Dr. Charles A. Ragan, Jr., is President of the American Rheumatism Association and has been made Chairman of the Metabolism and Nutrition Study Section of the National Institutes of Health. He is also Editor of the Macy Conference on the Connective Tissue. Dr. Ragan delivered an address at the 8th International Congress on the Rheumatic Diseases in Geneva. Dr. William B. Sherman was elected President of the New York Allergy Society and was made a Trustee of the American Foundation for Allergic Diseases. Dr. John V. Taggart addressed the Renal Association at the Royal Academy of Medicine in London and lectured at the International Congress of Physiologists in Montreal. Dr. René Wégria lectured at several hospitals in Paris and at the University of Louvain. Dr. Robert F. Loeb received the honorary degree of LLD from the University of Wales. He was elected Vice-President of the Association of American Physicians and was made an Honorary Fellow of the Royal Australasian College of Physicians. Many members of the staff gave lectures at various universities throughout the country and at a large number of medical meetings.

Distinguished foreign scholars including Sir Rudolph A. Peters, Professors Frank G. Young, C. H. Stuart-Harris, Graham Bull, H.

Malmros and J. Lind, as well as Drs. Robert W. Berliner, Seymour S. Kety, William S. Tillett, Harold Wolff, Lawrence Young and others from Medical Schools and Institutes in this country have participated in clinical conferences on the Medical Service. As in the past we have had a series of outstanding Visiting Fellows from Oxford University, University College Hospital in London and other foreign institutions in the Department of Medicine in the Medical School. By virtue of legal restrictions these men have unfortunately not been permitted to participate fully in clinical activities of the Medical Service of the Presbyterian Hospital, to their detriment and to ours. It is hoped that some means may be found to alter this situation. This year we have again had numerous American Fellows supported by the American Cancer Society, the Life Insurance Medical Research Fund, the New York Heart Association, the National Research Council, the Eli Lilly Foundation, the Fulbright Board, the Canadian Arthritis and Rheumatism Foundation and other agencies.

During the past year Dr. Harry Greisman, Assistant Attending Physician in Vanderbilt Clinic, resigned after many years of faithful service in the care of patients and teaching of students. Dr. Daniel L. Larson entered military service and is attached to the staff of the Army Medical School in Washington. Dr. Ernst R. Jaffé of the Resident Staff is on leave of absence due to illness.

The research activities of members of the Medical Service have continued to cover a broad range of interest and have proven unusually rewarding in the past year. The research program survives largely through generous donations made by friends of both the Hospital and the Medical School. For example, the Daniel G. Arnstein Research Fund established in the Presbyterian Hospital by Mrs. Edwin Weisl makes it possible to contribute significantly to the salaries of a number of members of the staff of Hospital and University who are on a rigid full-time basis. Likewise the Edward Daniel Faulkner gift makes available salaries for the full-time clinical and research staff and defrays many of the costs of the Arthritis Clinic. In the Medical School laboratories where most of the actual investigative procedures are carried out, substantial financial assistance from the Public Health Service, the Office of Naval Research, the American Cancer Society and other groups has been essential for the continuation of investigation.

Dr. Stanley E. Bradley and Dr. Edgar Leifer have extended studies on the distribution of delays in the movement of filtrate from the glomeruli to the bladder in normal man and in patients with renal insufficiency.

Renal disease appears to change the pattern by increasing the delay time, presumably by elimination of rapidly emptying components or by a relative increase in intra-renal dead space. In collaboration with Dr. Leifer, Dr. Emanuel M. Papper of the Service of Anesthesiology and Dr. David V. Habif of the Surgical Service, application of this method has failed as yet to reveal any change secondary to general anesthesia.

Dr. Willoughby Lathem and Dr. Bradley have completed an investigation of the reduction in protein excretion during orthostasis in patients with renal disease. Mrs. Katherine J. Baker and Miss Barbara S. Jones, in Dr. Bradley's laboratory, have succeeded in setting up a method of paper electrophoresis suitable for routine use which provides a means of routine quantitative serum protein analysis. Urinary protein partition by this method has already revealed that changes in proteinuria affect all moieties equally.

A method of estimating the volume of blood in the splanchnic bed, devised by Dr. Bradley in collaboration with Drs. Paul A. Marks and Jay I. Meltzer, indicates that approximately 20 per cent of the total blood volume in dogs and men lies in the splanchnic vessels. Dr. Marks has found that Apresoline increases the volume and Dr. Peter C. Reynell from Oxford University has found that hemorrhage decreases it in dogs.

Mr. Richard M. Hays has worked out methods of measuring I^{131} and P^{32} in the blood simultaneously and with Dr. John R. K. Preedy and Dr. Burton Cominsky is making a comparison of red cells and plasma volume in the splanchnic bed. Drs. Cominsky, Preedy and Henry O. Wheeler are using the data obtained by this method to evaluate circulatory delay across the splanchnic bed in the hope of devising a method to measure hepatic arterial and portal venous inflow separately. They are also engaged in further studies of the action of drugs. These studies have been supported by the New York Heart Association and a grant from the Department of the Army.

Drs. John V. Taggart and David Schachter with support from the Rockefeller Foundation and the Edward Gibbs Prize of The New York Academy of Medicine have been engaged in studies on the enzymatic synthesis of hippuric acid and other products of glycine conjugation. Benzoyl-Coenzyme A was prepared by chemical means and shown to be the energy-rich intermediate in hippurate synthesis. The enzyme which catalyzes the transfer of the benzoyl group from CoA to glycine has been isolated from the mitochondria of beef liver in an essentially homogeneous state, as judged by electrophoresis and ultracentrifuge studies. This enzyme has been shown to transfer a variety of acyl groups, both aliphatic and aro-

matic, from the corresponding acyl derivatives of CoA to glycine, and therefore has been designated as "glycine N-acylase." While such an enzyme has long been regarded as functioning in 'detoxication' processes, other possible physiological functions are being explored. Dr. Gilbert H. Mudge and Dr. Hans W. Neuberg have continued their studies on cellular mechanisms of electrolyte transport and, in particular, have studied their relationship to the intermediary metabolism of the derivatives of phosphorus. The reactions of aerobic phosphorylation have been subjected to a detailed re-examination in an attempt to define the role of the aerobic formation of phospho-enol-pyruvate and the relationship of this compound to the major energy-yielding reactions of aerobic metabolism mediated via the adenylic acid system. Support for these studies has come from the American Philosophical Society and the Rockefeller Foundation. During the past year Dr. Richard J. Cross, Walter W. Palmer Fellow in Medicine, has been studying the metabolism of ketone bodies, investigating factors which appear to influence the formation of these compounds by surviving slices of rat liver. In vitro studies have been carried out on the effect of adding various substances to the medium in which the slices were being incubated. In addition, comparative studies have been made of the effect of feeding various diets to the rats before sacrifice. Particular emphasis has been laid on investigating how the nature of the protein and the fat of the diet affects ketogenesis by surviving liver slices. This work has been supported by the United States Public Health Service. (U.S.P.H.S.)

Dr. Irving M. London has continued his studies on the metabolism of erythrocytes, on the biosynthesis and metabolism of hemoglobin, and on the formation of antibodies. Studies on the metabolism of human erythrocytes have demonstrated that the cholesterol of the erythrocyte is in dynamic exchange with the cholesterol of the plasma and that little or none of the cholesterol of the mature erythrocyte is synthesized by the erythrocyte itself. In studies carried out in association with Dr. Elhanan Dimant, of Israel, Dr. London has shown that the glutathione of mature mammalian and avain erythrocytes is in the dynamic state; the extent to which glutathione may be synthesized by the erythrocyte itself is now under investigation. Studies on the biosynthesis of hemoglobin have been concerned with further delination of the optimal conditions for the synthesis of heme in vitro in immature mammalian and avian erythrocytes. The role of folic acid in the formation of heme and of globin has been studied in conjunction with Dr. Nicholas B. Myant of University College Hospital in London. The effects of copper and of lead on the formation of heme have also been investigated. In conjunction with Dr. Helen M. Ranney, Dr. London has

continued to study the formation of antibodies in surviving tissues in vitro. The formation of antibody in spleen, lung, bone marrow, and liver is established. The technique devised in these studies is particularly useful for controlled study of the synthesis of proteins in vitro. Support for these studies came from the Office of Naval Research and the Eli Lilly Foundation.

As in recent years, Dr. Karl Meyer has worked exclusively on problems of connective tissue which are being approached from two angles: (1) the isolation and characterization of the ground substances of connective tissue, and (2) the enzymatic breakdown of the main constituents of the ground substances. Dr. Meyer and his associates have isolated and characterized a new type of sulfated mucopolysaccharide composed of N-acetylglucosamine, galactose and sulfate. In collaboration with Dr. Bernard I. Weissmann, new methods for the isolation and characterization of the oligosaccharide fractions formed by enzymatic hydrolysis of hyaluronic acid have been worked out. The synthetic function of testicular hyaluronidase was discovered during these studies. The hydrolysis of hyaluronate by bacterial hyaluronidase has been shown to be accompanied by a conversion of the glucuronidic endgroup in a new type of glycosidic splitting. This reaction is being studied further with Mr. Alfred Linker. Dr. Meyer's research is supported by the Edward Daniels Faulkner Gift and grants from U.S.P.H.S. and the Helen Hay Whitney Foundation.

Dr. Marcel Goldenberg, with a grant from U.S.P.H.S., has continued his studies on chemical, fluorometric and bioassay techniques for the diagnosis of pheochromocytomas. Also he has been studying the possibility of inhibiting the synthesis of adrenaline and nor-adrenaline by 3,4-dopa-decarboxylation inhibitors. 2,5-dopa decreased the adrenaline, nor-adrenaline content of rat adrenals to about 50% of the control values. On the other hand, a significant increase of the adrenaline, nor-adrenaline content of rat adrenals was found following 3,4-dopa administration. These findings are important in confirming the suggested pathway of adrenaline synthesis and because of therapeutic possibilities, particularly in at least certain types of hypertension.

During the year 1953 Dr. George A. Perera has continued his interest in hypertensive vascular disease. From the standpoint of natural history, he is now in the process of accumulating data on 500 hypertensives, 150 followed from before onset until death, 350 from an uncomplicated phase until death. Investigative studies supported by U.S.P.H.S. and the Albert and Mary Lasker Foundation have included observations on potassium-deficient diets in hypertensive man which produce small decreases in blood

pressure despite a concomitant sodium retention. A grant from the Squibb Institute has permitted Dr. Perera to begin detailed investigation of the action of rauwolfia serpentina; preliminary studies suggest this drug may produce alterations in electrolyte excretion. Metabolic studies with dehydroisoandrosterone and benemid were also undertaken but gave negative results in hypertensives. Dr. Perera has continued to cooperate with Dr. Paul A. DiSant'Agnese of the Pediatrics Service and Dr. Robert C. Darling of the Service of Physical Medicine in the studies showing that subjects with cystic fibrosis of the pancreas lack the ability to reduce their excretion of electrolytes in sweat. He has also initiated and supervised animal studies dealing with the mechanism of fever.

Under the leadership of Drs. Charles A. Ragan and Ralph H. Boots the Faulkner Arthritis Clinic group has received support from the Edward Daniels Faulkner Fund, the Masonic Foundation for Research and Human Welfare, the New York Chapter of the Arthritis and Rheumatism Foundation, and the United States Public Health Service. Interests have continued to focus on studies of the pathogenesis of rheumatoid arthritis and allied diseases, and on the host response to inflammation and repair. Dr. Felix E. Demartini has completed his Fellowship and has remained with the group on a part-time basis. Dr. Ronald W. Lamont-Havers, on completion of his Canadian Arthritis and Rheumatism Society Fellowship, has returned to Vancouver where he is starting a rheumatism study group at the University of British Columbia. Dr. Baruch S. Blumberg has joined Dr. Ragan's group on a Fellowship from the American Rheumatism Foundation and Dr. John R. Martin with support from the Canadian Rheumatism Society. Dr. Lamont-Havers completed one phase of his study of the relationship of the sensitized sheep cell agglutination and the streptococcal agglutination (S.A.). A similar but not identical factor in the gamma globulin fraction of serum is the agglutinin for both reactions but a factor present in normal adult serum is also required in the S.A., presumably to sensitize the streptococci.

The group of patients in the Faulkner Clinic receiving long-term hormonal antiphlogistic therapy continues to shrink with time and experience because the over-all results are often unsatisfactory. Several patients with disseminated rheumatoid arthritis and with prolonged cortisone treatment have developed widespread necrotic and nodular lesions throughout the body and evidence suggests that the primary lesion is a vascular one consisting of fibrinoid necrosis of the vessel wall. These patients were studied at Goldwater Memorial Hospital with Dr. Margaret Bevans. Various steroids with potent antiphlogistic but weak adrenal

action are now being studied in patients with arthritis.

The animal work devoted to detailed study of the effect of cortisone on fibroplasia has continued in conjunction with Dr. Raffaele Lattes of the Surgical Service. Various connective tissue polysaccharides isolated by Dr. Karl Meyer with ion exchange resins have failed to overcome the cortisone effect while localized infection with several pyogenic organisms has completely done so. Dr. Ragan has worked with Dr. Frederic J. Agate, Jr. of the Department of Anatomy on hypophysectomized rats and the cortisone inhibition has been noted in these animals. A tissue culture laboratory has been set up under Dr. Henry D. Grossfeld in Dr. Gabriel C. Godman's histochemical laboratory of the Medical School and two projects are being actively studied—the growth of connective tissues *en masse* for biochemical and histochemical correlation and the influence of adrenal and pituitary hormones on these tissues.

During the past year, with aid from the Masonic Foundation for Medical Research and Human Welfare, the U.S.P.H.S. and the Edward Daniels Faulkner Arthritis Clinic, clinical and laboratory activities were continued by Dr. Edward E. Fischel with regard to inflammation, immunity and rheumatic activity. With Dr. Charles W. Frank, further follow-up studies are in progress in the cooperative study on the management of rheumatic fever. The data from institutions in this country, Canada and England are being analyzed at the offices of the American Heart Association. The chemical factors in the serum associated with inflammation are of continued interest. Attempts to evaluate the relationship temporally and chemically between serum complement, C-reactive protein, the sedimentation rate and a streptococcidal substance continue. Further studies of the clinical applications of serum complement determinations in myocardial infarction and other inflammatory states are in progress. Rabbits have been immunized in preparation for a long-term study on the relationships of various streptococcal antigens to allergic reactions.

Dr. Betty S. Roof and Dr. Joseph C. Turner have begun a study of the metabolism of the antirheumatic phenolic acids. With bacterial systems it has been possible to examine the mode of oxidation of the aromatic ring; isolation and characterization of the aliphatic products is under way. It should then be possible to extend the observations to animals, as well as man. This research has been supported by the U.S.P.H.S. and by the Arthritis and Rheumatism Foundation.

With Dr. Otto J. Plescia and Mr. Myron Leon, Dr. Michael Heidelberger continued his effort to measure quantitatively the second com-

ponent of complement. A reagent containing first, third and fourth components was prepared from pig serum. Mixed with sublytic amounts of guinea pig complement it caused lysis of sheep cell-antibody mixture, but was unsuited for quantitative estimations because at high concentrations of reagent acceleration was replaced by inhibition. Inhibition appeared to be a "pseudo first order reaction" with an activitation energy of about 18 kilocalories per mole. The dependence of hemolysis on the concentrations of sensitized cells and complement was also studied and a theory formulated.

With Mr. Harold Markowitz, the specific polysaccharide of Type 18 pneumococcus was found to consist of glucose, rhamnose, and secondary phosphate. Probably because of the breaking of PO_4 linkages alkali destroys the serological specificity of the substance. Dr. Heidelberger has extended his work with the polyglucoses and was able to predict and establish that glycogen and amylopectin, common animal and vegetable carbohydrates, give precipitates with the antibodies in many of the antipneumococcus sera which are reactive with the synthetic polyglucoses and dextran. With Mr. Arnold B. Powell the -SH groups of crystalline egg albumin were condensed with iodoacetamide, apparently without a change of immunological specificity. The new protein has been crystallized and is being further studied, as is also the condensation product with β-iodopropionamide. With Dr. Elliott Middleton, Jr., it was found that an inhibitor of specific precipitation in mouse sera reduces greatly the amount of specific precipitate calculated to appear in several immune systems. The formation in mice of large amounts of antibodies to the factor in mouse milk concerned with mammary carcinoma would therefore be necessary before such antibodies could be detected by precipitation with the purified milk factor. Dr. Heidelberger's studies have been supported by the Rockefeller Foundation and the Department of the Army.

Laboratory research on experimental chemotherapy of a variety of transplantable tumors using analogs of purines and pyrimidines has been continued by Dr. Alfred Gellhorn. This work is supported by the Lasker Foundation and the U.S.P.H.S. Studies have been initiated to determine the cocarcinogenicity of tobacco tar. This investigation and another project in which the carcinogenicity of highly polymerized desoxyribose nucleic acid from an animal tumor will be studied, is supported by the Alma Toorock Memorial Fund. Clinical research on the biology of the tumor-bearing host includes investigations on the mechanism of anemia, the metabolism of amino acids and the study

of abnormal serum protein components in certain neoplastic diseases. These investigations are supported by grants from the U.S.P.H.S. Experimental clinical cancer chemotherapy has been extended through the help of grants from the Albert and Mary Lasker Foundation.

Dr. Abbie I. Knowlton and Dr. Emily N. Loeb in conjunction with Dr. Herbert C. Stoerk of the Merck Institute for Therapeutic Research, are extending studies of adrenal steroids. The influence of these steroids singly and in varying combination has been observed upon growth, blood pressure, serum electrolytes and cardiac and renal size in adrenalectomized rats on sodium restriction. Doses of DCA alone over a range of 0.005 to 1.25 mg. progressively enhanced growth, whereas similar amounts of cortisone acetate uniformly led to weight loss. With combinations of the two steroids, doses of cortisone acetate in excess of 0.32 mg. daily interfered with the characteristic growth-promoting effect of DCA. With DCA alone serum sodium levels rose with increasing doses to assume normal levels at 0.08 mg. per day and above, while with cortisone acetate no effect upon serum sodium levels was observed until doses of 1.25 mg. daily were given. At this level and above, normal values were obtained. With combinations of the two steroids the DCA effect predominated. With increasing amounts of DCA alone the blood pressure levels reached a low normal range at doses of 0.08 mg. daily and remained in the normal range despite daily doses as high as 2.5 mg. With a similar range of dosage of cortisone acetate, normal values were not observed until a daily dosage of .32 was given and with further increases in dosage progressively severe hypertension appeared. With DCA and cortisone acetate in combination the hypertensive effects of the latter were predominant. These studies have been aided by grants from the U.S.P.H.S. and the Albert and Mary Lasker Foundation.

Studies by Dr. Joseph W. Jailer, together with Drs. Eleanor Z. Wallace, Jay J. Gold and Raymond Van der Weile, on adrenal cortical hyperfunction are continuing along the lines presented previously and are carried on the laboratories of the Department of Obstetrics and Gynecology. From the data collected it would seem possible to differentiate cases with adrenal virilism due to adrenal hyperplasia from those due to adrenal tumor, on the basis of the response of urinary 17-ketosteroid values to the administration of cortisone. In Cushing's syndrome five out of six patients with disease due to adrenal hyperplasia there was a significant fall in the urinary 17-ketosteroids; while in five patients with adrenal tumors, either adenoma or carcinoma, there was no such fall. This suggests that the tumors are independent of pituitary control as sup-

pression of ACTH secretion by cortisone did not result in decreased 17-ketosteroid excretion.

Studies by Dr. Jailer's group are continuing to ascertain the underlaying steroidal effect in adrenal virilism due to hyperplasia. There is evidence that in this disease the normal steroidal percursors may be either 17-hydroxy-progesterone and/or 21-desoxyhydrocortisone. Due to an enzymatic block the full sythesis of hydrocortisone is not attained and the percursors designated above reach the circulation and are degraded to steroids which are androgenic. These observations and views are in harmony with those of other investigators. Dr. Jailer's research has been supported by the U.S.P.H.S. and the Upjohn Company.

In collaboration with Dr. Robert McC. Day of the Eye Institute, Dr. Sidney C. Werner has carried out a study of the removal rate of Na^{24} from the orbit of patients with thyroid eye and has shown that there is no obstructive element within the orbit. The process seems consistent with an active inflammation. In collaboration with Dr. Frederic Agate of the Department of Anatomy the roles of concentration and total quantity of the pituitary trophic hormones has been studied in the rat. Available hormonal concentration rather than the total amount appears to be the important factor for thyrotrophin, gonadotrophin, and adrenocorticotrophin. New evidence has been traduced that Graves' disease is a disorder not mediated through the anterior pituitary. Thus triiodothyronine, in doses equivalent to 2 to 3 gm. of thyroid extract, did not suppress I^{131} uptake by the thyrotoxic gland. Dr. Werner has also devised a simple highly accurate modification of the 24-hour I^{131} diagnostic procedure by adopting the 72-hour SPI^{131} procedure to the 15 microcurie I^{131} dose used for the uptake determinations. The investigation of the iodide compartments of the body continues. An analysis of follow-up studies for seven years after I^{131} therapy of Graves' disease is being made by Dr. Werner. Data from 100 patients are available. These studies have been aided by grants from the U.S.P.H.S. and the James Picker Foundation.

Studies by Dr. Alvan L. Barach on mechanically induced cough resulted in the development of a method of producing air-flow velocities surpassing those of normal individuals and several times higher than the expiratory flow-rates of patients with poliomyelitis, pulmonary emphysema and allied syndromes. In collaboration with Dr. Gustave J. Beck, this technique, Exsufflation with Negative Pressure, (E.W.N.P.) was studied physiologically and clinically. The apparatus developed was of life-saving value in some cases of poliomyelitis and enabled others to be re-

moved from the tank respirator; its use in cases of broncho-pulmonary disease was followed by moderate or marked improvement in respiratory function, depending on whether or not the breathing difficulties were due to retained secretions. Dr. Hylan A. Bickerman, at Goldwater Memorial Hospital, showed that, in anesthetized dogs, bullets and safety-pins could be safely blown from the lungs by E.W.N.P. Diaphragmatic breathing, found to be of value in patients with poliomyelitis, as well as in those with pulmonary emphysema, could be initiated by specially designed belts and abdominal weighted jackets, the results of which were manifested by a fifty per cent decrease in respiratory rate and relief of dyspnea. These studies were supported by the National Foundation for Infantile Paralysis and the Asthma Physiological Gift.

Mrs. Katherine M. Price and Dr. Yale Kneeland, Jr., have succeeded in producing capsular swelling of a mucoid strain of staphylococcus aureus with specific immune serum. The "quellung" phenomenon has never been previously described in connection with staphylococci, and the reaction may prove to be useful as a means of type-differentiation. The technique is now being applied to other strains of staphylococci. Mrs. Price is also studying strains of this organism from cases of ulcerative colitis in association with Dr. Robert B. Hiatt of the Surgical Service. In addition to these bacteriological studies, Mrs. Price is continuing her work on chemotherapy of virus infections with Dr. A. Raymond Dochez.

Work on the determination of blocking antibody in the serum of patients treated with ragweed antigen by the inhibition of complement fixation has been continued by Dr. William B. Sherman in cooperation with Dr. Joseph Portnoy. The method has proved to be highly specific but less sensitive than the method based on passive transfer. The allergy laboratory has cooperated in a study of pollens of southern Florida with the Department of Botany of the University of Miami and a number of physicians in Florida. Several new antigenic pollens have been detected and their importance is being evaluated. Both of these projects were supported by the Allergy Fund which received a special contribution for the latter purpose.

Together with Drs. Dickinson W. Richards, Jr., Harry A. Bliss and John A. Wood, Dr. John R. West has completed a series of pulmonary function studies in a group of patients with rheumatic heart disease who were ambulatory and not in cardiac failure. Little deviation from normal was observed in the lung volume, ventilatory function, and the arterial blood gases in these patients, many of whom had severe exertional dyspnea. To throw more light on the genesis of this symptom a new

series of studies has just been started in which emphasis is being placed upon disturbances in the mechanics of breathing in heart disease. Studies by Dr. West and his associates, including Dr. diSant'Agnese of the Pediatrics Service, have defined the basic disturbance in lung function in patients with cystic fibrosis of the pancreas and have suggested that early and intensive treatment of these patients' respiratory infections may appreciably influence the pulmonary function in later life. Observations of Dr. James K. Alexander and Dr. West on the ventilatory response to carbon dioxide inhalation have indicated that patients with chronic pulmonary disease and respiratory acidosis have diminished sensitivity to this stimulus. This seems to be related to the elevation in serum carbon dioxide *per se*. Dr. West's studies have received support from the Frueauff Research Gift, the U.S.P.H.S. and the Eleanor De Forest Baldwin Gift.

Dr. René Wégria and his associates, including Drs. Charles W. Frank, Hseuh-Hwa Wang, Donald M. Kanter, Marvin R. Blumenthal, Peter Kornfeld and R. D. Seely finished a study on the effect of auricular and ventricular tachycardia of different rates on the cardiac output, mean arterial blood pressure and coronary blood flow of the anesthetized dog. It was observed that with a rate of auricular tachycardia only slightly higher than the control rate no change is induced by the tachycardia. As the rate is increased, cardiac output and blood pressure fall below control level, whereas the coronary blood flow rises above control. Results qualitatively similar are obtained with ventricular tachycardia but quantitatively the changes induced by a bout of ventricular tachycardia are similar to the changes induced by a bout of auricular tachycardia of a higher rate. In a second study it was established that, at least in the anesthetized animal, there is no evidence that occlusion of one of the three main coronary arteries ever induces a reflex spasm of the other two coronary arteries. As a preparation for studies on metabolism of the left ventricle, study is now in progress on the venous drainage of the coronary blood.

Dr. John H. Laragh has completed a study on the effect of potassium chloride on hyponatremia in man. In an effort further to define these observations ten balance experimental studies have been carried out with the help of Dr. Nicholas E. Capeci. In addition, with the cooperation of Dr. Harry B. Van Dyke, of the Department of Pharmacology, Dr. Laragh has shown that experimental ascites can be readily produced without demonstrable posterior pituitary function, i. e. in diabetes insipidus. This ascites is not modified by water restriction. These studies have been supported by the U.S.P.H.S. With Dr. Robert L. Levy, Dr. Laragh has been studying the effectiveness of certain drugs which dilate the coronary arteries.

During the past year Dr. Stuart W. Cosgriff has continued clinical investigation of the anticoagulants, particularly a new coumarin compound "Coumadine" which may be administered parenterally as well as orally and which is usually effective within 18 hours and which has a prolonged action (3 to 5 days). At the moment this appears to be the most promising agent available. It also seems to carry less risk of hemorrhagic complications. Dr. Cosgriff has also studied a malingerer exhibiting hemorrhage due to self-administered dicumaral. The value of dicumaral blood levels in recognition of this type of disorder and its medico-legal importance were emphasized. Dr. Charles A. Flood has made studies to determine the significance of esophageal reflux in the prevention of esophagitis in patients with hiatus hernia and also the factors regulating the cardiac sphincter. With Dr. Michael J. Lepore and members of the psychosomatic clinic, studies on the natural history of ulcerative colitis have continued. Dr. Kenneth B. Turner has continued to investigate the cholesterol esterifying enzymes in human sera. Dr. Henry Aranow, Jr. has continued to carry out studies on the comparative merits of the newer agents employed in the treatment of myasthenia gravis.

Dr. William H. Sheldon and his associates Drs. Albert Damon, Sylvia G. Traube and Mr. Richard H. Osborne have continued studies of human constitution both here and at the University of Oregon. A volume on somatotypes of men is in print. Studies on twins, on patients with diabetes, peptic ulcer, cancer, rheumatoid arthritis and a number of other disorders are under way but owing to large numbers necessary for sound analysis considerable time will be needed for the completion of these studies.

This review of research efforts listed is per force fragmentary, but it is hoped that it may serve to sketch-in the areas of interest and the types of problems being attacked by various members of the Medical Staff.

NEUROLOGICAL SURGERY

J. Lawrence Pool, M.D., *Director*

In 1953 nearly 1,000 major operations were performed by the Service of Neurological Surgery at the Neurological Institute, the exact number being 986 as contrasted with 850 in 1952. Close to 120 additional major operations have also been carried out by members of the Neurological Surgery Attending Staff in the operating rooms of the Presbyterian Hospital in conjunction with the Orthopedic Surgery Service Attending Staff, at the Delafield Hospital and at the New York State Psychiatric Institute. Patient care has been improved in the Hospital thanks to the new ventriculogram room which has proved such a useful adjunct to our operating room suite. The Vanderbilt Clinic arrangements have likewise been improved so that in 1953 there has been a daily instead of a weekly neurosurgical clinic, and in addition a special monthly Saturday morning Follow-up Clinic.

The resident training program has now developed so that each candidate spends six to twelve months in the research laboratory, and six months on the Service of Neurology before becoming an Assistant Resident on the Neurological Surgery Service. Training in Neuropathology is supervised by Dr. Abner Wolf, and in Neuro-roentgenology by Dr. Juan M. Taveras, during the course of the residency. Monthly Review Conferences are also held with the Attending Staff. By a system of off-service rotation, each Resident acquires experience in pain relieving procedures during his tour of duty at the Delafield Hospital, and in psychosurgery at the New York State Psychiatric Institute. To sharpen their ability in organizing and presenting data, all Residents are now expected to write at least one paper a year on clinical or research work in which they have participated. This program, together with the great volume of rare and routine cases which is available, amply meets the requirements of the American Board of Neurological Surgery.

Research projects include a thorough study of electrolyte and endocrine changes before and after the surgical decompression of pituitary gland tumors. This investigation, largely carried out by Dr. Arthur F. Battista, Assistant Resident Neurological Surgeon, and Dr. Abbie I. Knowlton, Assistant Attending, Medical Service, is of great practical value in the successful management of these patients by serving as an

accurate guide to proper supportive therapy, an important matter in pituitary cases, which present special problems in electrolyte balance.

An improved method of outlining infiltrative brain tumors is being worked out by the use of depth as well as surface electrodes for recording electrical abnormalities of the brain at operation.

Dr. Pool has recently begun a trial of focal therapeutic stimulation of the human brain for relief of pain and other disorders due to incurable diseases. Fine electrodes are implanted stereotaxically by R. G. Heath's method. A closely related procedure, using miniature induction coils, was developed in 1948 by Dr. Pool, marking the first use of permanently implanted electrodes within the human brain for therapeutic purposes.

The treatment of postencephalitic Parkinson's Disease by ligation of the anterior chorioidal artery (Cooper operation) is now under investigation by Dr. Pool with promising results thus far in patients of the younger age group.

With Dr. Jorgen Therkelsen, Research Assistant, he has surveyed the problem of gastric hemorrhage secondary to lesions of the central nervous system and has completed an experimental study of preserved nerve grafts.

Laboratory and clinical efforts directed at the biochemical arrest of malignant brain tumors (glioblastoma multiforme) are being continued, thanks to the help of Dr. Margaret R. Murray, Assistant Professor of Surgery, and others. Despite promising leads, however, there is as yet no evidence of clinical improvement by this means.

Clinical investigations also include special studies of the cerebral circulation by Dr. Lester A. Mount, Associate Attending Neurological Surgeon; a trial of newer methods to relieve hydrocephalus by Dr. Joseph Ransohoff, Associate Attending Neurological Surgeon; and plethysmographic records of cerebral and peripheral blood flow by Dr. Thomas J. Bridges, Jr., Associate Attending Neurological Surgeon. The information thus obtained in all of these projects has already proved of great practical as well as theoretical value.

Dr. Mount continues his study of changes in cerebral blood pressure under various circumstances by means of direct recordings from small and large arteries, and with Dr. Taveras, Assistant Attending Radiologist, is making important observations on collateral circulation of the brain, by means of arteriography before and after various arterial ligations.

Dr. Bridges has had a most productive year devoted to the following investigative projects: Digital vasomotor responses to nerve root stimulation, with Dr. Melvin D. Yahr, Assistant Attending Neurologist; Cerebral

plethysmography—a preliminary report; Cine-photographic visualization of pial vessels, with Mr. Edward Hajjar; Planned hypotension in neurological surgery with Dr. Daniel P. Tausig, formerly Assistant Attending Anesthesiologist; A study of excreted adrenal cortical metabolites after thoraco-lumbar and total sympathectomy, with Dr. Perry B. Hudson, Assistant Urologist; A study of temperature and pain sensibilities after cordotomy, with Dr. John Piro, D.D.S., Delafield Hospital; and, a study of expectancy and of pain in cancer patients. He has participated in "Telicolor Clinics" sponsored by the American Cancer Society and Columbia Broadcasting System, has served as an impartial consultant to Supreme Court Judges, and has presented a ten minute radio "alert" on Early Diagnosis of Brain Tumors which was sponsored by the New York County Medical Society.

Dr. Ransohoff has actively pursued the treatment of hydrocephalus by ventriculo-pleural and ventriculo-peritoneal anastomoses in conjunction with Dr. Robert B. Hiatt, Assistant Attending Surgeon, and plans more extensive studies of cerebrospinal fluid physiology by the use of radioactive substances, with the cooperation of Dr. Edith H. Quimby, Associate Professor of Radiology, and Dr. Robert A. Fishman, Chief Resident, Service of Neurology. Dr. Ransohoff is engaged in the search for improved methods of psychosurgery at the New York State Psychiatric Institute with Dr. Pool and members of the Psychiatric Institute Staff, under the direction of Dr. Paul H. Hoch.

Dr. James B. Campbell, Assistant Attending Neurological Surgeon, "unofficial director" of the Neurological Surgery Research Laboratory, is actively investigating the experimental use of controlled implanted radioactive substances designed ultimately for the therapy of malignant brain tumors. He is also engaged in clinical and laboratory studies of bladder innervation which bear the promise of helping many sufferers from faulty bladder control. Finally, Dr. Campbell continues his interest in the surgical relief of children suffering from crippling congenital disorders of the central nervous system.

Special scientific and civic projects in which Staff members have participated in 1953 may be summarized as follows:

Dr. Pool continues as a Scientific Director of the Yerkes Laboratories for Primate Biology Inc. at Orange Park, Florida, and in June 1954 completes a six year term as an Overseer of Harvard College, in which capacity he is Chairman of the Visiting Committees for the Harvard Medical School, the Psychological Laboratories, the Biological Laboratories and the Museum of Comparative Zoology.

Dr. John E. Scarff, Attending Neurological Surgeon, served as Chairman of the Scientific Forum of the American College of Surgeons, October 1953, and presided at a session of the Fifth International Neurological Congress in Lisbon, September 1953. He has also been appointed a member of the Advisory Board of the International Abstracts of Surgery for Neurosurgery.

Dr. Fritz J. Cramer, Associate Attending Neurological Surgeon, served on the Committee on Trauma sponsored by the American College of Surgeons at the Columbia-Presbyterian Medical Center in February 1953.

Dr. Edward B. Schlesinger, Attending Neurological Surgeon, is a member of the Executive Committee Coordinating Council for Cerebral Palsy and a member of the Committee for Research Grants.

Dr. Mount was made Honor Citizen of the Year by the Chamber of Commerce of Lebanon, Ohio, in recognition of accomplishments in his chosen field. He was elected secretary of the Neurosurgical Society of America and Vice-President of the New York Neurosurgical Society.

With regard to honors, travels and papers given by the Staff, Dr. Pool, as President of the American Academy of Neurological Surgery, gave the presidential address, Neurosurgery and the Mind. In June 1953 he was awarded a Certificate of Distinguished Service by the New Jersey State Hospital at Greystone Park. At the American Neurological Association meeting in Atlantic City, New Jersey he was co-author of a paper on Electrolyte Changes following Pituitary Gland Surgery with Dr. Arthur Battista and Dr. Abbie I. Knowlton, and at the Annual meeting of the Harvey Cushing Society in Hollywood, Florida, gave a paper entitled, The Visceral Brain of Man, which will appear in the January 1954 edition of the Journal of Neurosurgery. He also attended in Florida a three day scientific meeting at the Yerkes Laboratories for Primate Biology under the direction of Dr. Karl Lashley. A subsequent meeting of this group took place in New Haven, Conn. At the winter meeting of The Neurosurgical Society in New Orleans, La., Dr. Pool discussed a paper by Dr. Robert G. Heath concerning the effects of electrical stimulation of the brain by means of permanently implanted electrodes. At an autumn meeting of the Congress of Neurological Surgeons in New Orleans, Dr. Pool was an invited member of one panel on Psychosurgery and one on Electrolyte and Fluid Changes in Post-operative Neurosurgical patients. In addition, Dr. Pool has collaborated in the following papers: The Cervical Disc Syndrome: Differential Diagnosis and Management based on twenty-six operated cases; Enzymatic Deamination of 8-Azaguanine in Normal Brain and in Glioblastoma Multiforme, with Dr. Eric

Hirschberg, Dr. Margaret R. Murray, Miss E. R. Peterson, J. Kream and R. Schafranek; Electrical Excitability of Human Uncus, with Dr. Murray Glusman, Assistant Neurologist, Dr. Norman Sloan and Dr. Ransohoff; Subcortical Parietal Lobotomy for Relief of Phantom Limb Syndrome in the Upper Extremity, with Dr. Bridges, and Myelographic Demonstration of Spinal Cord Metastases from Primary Brain Tumors, with Dr. Ernest H. Wood and Dr. Juan M. Taveras.

Dr. Scarff read a paper in Chicago before the Chicago Medical Society on Classic Syndromes of Brain Tumor, and in Lisbon he presented a paper on Effect of Surgical Interruption of Cerebral Veins. On May 14, 1953 he participated in a panel discussion on Medical Aspects of Workmen's Compensation, his theme being Stump Neuromas and Causalgia.

Dr. Cramer spoke on The Time to Operate in Peripheral Nerve Injuries at the February 1953 meeting of the American College of Surgeons.

Dr. Mount has read six papers during the year: Two on blood pressure changes in cerebral blood vessels following carotid occlusion in the neck; two on a study of collateral circulation in the brain following ligation of the internal carotid artery for the treatment of intracranial aneurysm; and two on experiences with ligation of the internal carotid artery using a Selverstone clamp. He discussed a paper on Hemorrhage of the Middle Meningeal Artery at the meeting of the American Medical Association in June 1953 and has published the following papers: Carotid Cavernous Fistula with Signs on Contralateral Side; case report, with Dr. Miguel Ramos; Problems Related to Treatment of Intracranial Aneurysms by Carotid Ligation, with Dr. Robert R. J. Strobos; and, Some Observations of Blood Pressure in Small Arteries on the Surface of the Brain.

Dr. Schlesinger has written two papers, one on the Syndromes of Cervical Root Compression and another on Factors in the Production of Cauda Equina Syndromes, and also a chapter for Dr. Louis J. Doshay's book entitled Surgical Treatment of Parkinsonism, a monograph which was published in The American Practitioner.

Dr. Ransohoff has been appointed Chief of the Neurosurgical Out-Patient Clinic, Vanderbilt Clinic. He presented the following papers: Post-traumatic Arachnoid Cysts, with Dr. Juan M. Taveras before the New York Neurosurgical Society; Brain Surgery for Relief of Mental and Emotional Illness, in the absence of Dr. Pool at the Twenty-fifth Anniversary Celebration of the Columbia-Presbyterian Medical Center; and Trauma to the Central Nervous System given before the Suffolk County Medical Society.

Dr. Byron Stookey, despite his recent retirement, continues to take an interest in teaching neurosurgical techniques, of which he is a master. His help in this regard is much appreciated.

Distinguished guests included Sir Geoffrey Jefferson, Neurosurgeon, of Manchester, England, who presented a lecture to the Neurological Institute Staff on Trigeminal Nerve Tumors.

Warm thanks are due all members of the Neurological Surgery Attending Staff not only for their keen interest in promoting the welfare of the Service leading to better patient care, but also for their great assistance in teaching house officers, medical students, nurses, and more and more frequently the lay public. Their active participation in the many functions of the Twenty-fifth Anniversary of the Columbia-Presbyterian Medical Center is likewise appreciated.

Gratitude is expressed to all consultants and co-workers from other Services and Departments whose help enables us to function so much more effectively. The constant friendly cooperation of our Neurological colleagues and their able leader, Dr. H. Houston Merritt is appreciated at all times.

The cheerful cooperation of Dr. Abner Wolf and Dr. David Cowen from Neuropathology, Dr. Taveras, Neuro-radiology and Dr. Sidney S. Goldensohn, Electroencephalography has been particularly helpful and enlightening. Miss Margaret Eliot, Acting Director of Nursing, Miss Beatrice Langmuir, Assistant Director of Nursing in charge of operating rooms, Miss Cecile Covell, Assistant Director of Nursing at the Neurological Institute, Mrs. Mary Ericson, her assistant, and our operating room Supervisor, Miss Evelean Pierce have contributed greatly to the improvement of the Nursing care at the Neurological Institute.

Gratitude is also expressed to the John Gunther, Jr., Charles Evans Hughes, Jr., and Diane Nichols Memorial funds for the gifts that are proving so helpful in special research activities, and to all those anonymous donors whose valuable contributions are so warmly appreciated.

The entire Staff extends the warmest appreciation to Mr. Charles P. Cooper, President of the Board of Trustees, Mr. John S. Parke, Executive Vice-President, and the Trustees of the Presbyterian Hospital for the tangible evidences of their help in supporting the Service of Neurological Surgery.

NEUROLOGY

H. Houston Merritt, M.D., *Director*

The clinical work of the Service of Neurology continued at the high level of previous years. The demand on our private and semi-private accommodations were especially heavy.

There were no retirements during the year. Dr. Eli Goldensohn came to the hospital from the University of Colorado to assist in the administration of the Electroencephalography and Electromyography Laboratories. Dr. William F. Caveness returned from his leave of absence while in the U. S. Navy. The service continues to attract a high calibre of resident staff. Drs. Lewis P. Rowland and Leonard Berg, after completion of their training, left us to join the U. S. Public Health Service at the new Clinic Center in Bethesda, Maryland. Fellowships to continue in clinical research were awarded to Dr. Christian Herrmann, Jr. by the U. S. Public Health Service; to Dr. William Amols by the Smith, Kline and French Company; and, to Dr. Marvin Lewis by the National Foundation for Infantile Paralysis. Dr. Malcolm B. Carpenter was awarded a fellowship by the Markle Foundation to work in the Department of Anatomy of the Medical School.

Clinical research by members of the resident staff included a study of the results of therapy in myasthenia gravis by Dr. Rowland; the relationship of syringomyelia and tumors of the spinal cord by Dr. Charles M. Poser; and, the reduction of the sugar in the cerebrospinal fluid of patients with neoplastic diseases of the meninges by Dr. Berg. Dr. Robert Fishman is studying the effects of transplantation of embryonic thymus gland, and Dr. James Austin, the exchange of protein in the cerebrospinal fluid by the use of labeled carbon atoms.

The combined output in the Electroencephalographic Laboratories under Drs. Paul F. A. Hoefer, Goldensohn and Herrmann was 5,519 clinical examinations. Of these, 3,737 were performed at the Neurological Institute and 1,782 in the laboratory on the 3rd Floor of the Presbyterian Hospital. During the year, the number of sleep and other activation methods increased considerably. A new routine study on patients from the Children's Epilepsy Clinic was instituted. All such patients who show no electroencephalographic abnormality in routine examination have a special study in which an attempt is made to activate the electroencephalogram by sleep or other methods. The use of electrocorticography and depth electrode recording during surgery on patients

with expanding lesions associated with seizures has become more frequent.

Remodeling of existing electroencephalographic space on the 13th Floor of the Neurological Institute allowed the formation of a new combined secretarial, record examination and resident training room. A classification system including record description, final diagnosis and other pertinent data by IBM method was begun. The space and facilities for clinical examination are now satisfactory but the problem of record storage is still acute.

Resident training in electroencephalography included a two-month course in electroencephalographic fundamentals by the staff and individual training of several residents assigned half time to the laboratory for periods of from three to 12 months. The establishment of a program for one or more research fellowships in Neurophysiology for individuals who have had previous neurological training has been explored.

Clinical electromyographic studies have been shifted mainly to oscillographic and camera recording. This method is generally more informative than the previously more frequently used ink-writing method. Dr. Christian Herrmann is engaged in clinical electromyography and is actively continuing his research on electromyography in muscle disorders.

Studies on unit discharges in cortical layers at rest and in induced epileptic seizures are continuing. Reviews of large series of electroencephalographic findings in association with brain tumor, migraine and seizures in childhood are in progress. A preliminary study on the effects of respiratory center activity in relation to the electrical activity of the cortex and consciousness was begun.

The published reports from the electroencephalographic laboratory include: Clinical and electroencephalographic findings in 29 verified cases of brain abscess by Drs. Hoefer and D. K. Ziegler; action potential and refractory period of striated muscle in man by Drs. Hoefer, G. H. Glaser, Herrmann and T. Estrin; the pituitary gland in relation to cerebral metabolism and metabolic disorder of the nervous system by Drs. Glaser; affectivity and psychosurgery by Drs. Hoefer and L. S. Kubie.

Dr. Hoefer began a six months' sabbatical leave on October 1, 1953 and during his absence Dr. Goldensohn was made acting director of the Electroencephalegraphic Laboratory. Dr. Hoefer is lecturing in Neurology at the Free University of Berlin on the Ford Foundation Fellowship program while on leave.

Drs. Yahr, Sidney S. Goldensohn, and Elvin A. Kabat have completed an analysis of the cerebrospinal fluid gamma globulin in 681 patients, in 244 of which a diagnosis of multiple sclerosis was made. In-

creased gamma globulin was found in 66.5 per cent of cases of multiple sclerosis, in 74 per cent of neurosyphilis as compared with a 3 per cent incidence in other diseases after excluding diseases causing an increase in serum gamma globulin. These studies were presented at the New York Academy of Sciences Conference on Multiple Sclerosis.

Dr. Elvin Kabat in collaboration with Drs. Abner Wolf, Mavis Kaufman and Miss Ada E. Bezer are continuing studies on acute disseminated encephalomyelitis in rhesus monkeys. An extensive review of the pathological findings in over 1,100 monkeys is under way. Studies on the mechanism of production of this disease and attempts to purify the antigen are continuing. In collaboration with Dr. Edward E. Fischel, Miss Ada E. Bezer, Dr. Marvin Skolnik and Dr. Herbert C. Stoerck of the Merck Institute, studies have been carried out on the role of the Freund adjuvants on antibody production in the guinea pig. Omission of tubercle bacilli or administration of cortisone so that local granuloma formation either does not occur or is suppressed results in reduced antibody production to egg albumin. Dr. Sidney Leskowitz and Dr. Kabat have developed a method for the determination of glucosamine and chondrosamine in mixtures. Mr. Peter Allen is studying the reaction of dextran with human anti-dextran as a function of various kinds of linkages in dextran. Dr. Mary E. Carsten has joined the group and will be studying the amino acid composition of the blood group substances and the binding of antibody to dextran for low molecular weight oligosaccharides. Dr. Kabat is serving as a member of the Panel on Plasma of the National Research Council and is a member of the Medical Advisory Board of the National Multiple Sclerosis Society and of the Editorial Board of the Journal of Allergy.

Drs. Ernst Herz and Melvin Yahr are completing several sections of a follow-up study of peripheral nerve injuries being prepared jointly by five institutions under the direction of the National Research Council and the Veterans Administration.

Drs. Sidney Carter, Daniel Sciarra and Melvin Yahr have continued their work with patients with convulsive seizures. Several new compounds were given a chemical trial. One of these, mysoline, was of value in the treatment of some of the patients whose seizures were refractory to other forms of therapy. Dr. William Caveness, returning after two years in the U. S. Navy, has charge of the Convulsive Disorder Clinic for Children and is conducting an extensive study of the pathogenesis of convulsions with particular reference to the effect of sleep on the electrical activity of the cerebral cortex. Dr. Caveness is

also in charge of a follow-up study of military personnel who sustained head wounds in the Korean campaign. Dr. James H. Brown has been awarded a clinical fellowship to assist Dr. Caveness in this study.

Dr. Lewis J. Doshay continues his studies of Parkinson's disease. With the aid of Dr. F. J. Agate, Jr., of the Department of Anatomy, attempts are being made to quantitate the degree of rigidity and tremor in these patients and to test the effects of various drugs on these symptoms.

A series of studies on the single innervated electrogenic units of the electric eel has been carried out by Drs. M. Altamirano, David Nachmansohn, Dr. C. W. Coates, Director of the New York Aquarium, and others. This work is progressing actively and has provided new information on the relationships between neural transmission, resting and action potentials of the electric units.

Studies of the cytochemistry of the electric units are being carried on by Mr. Paul Bernstein and Dr. C. Y. Kao. Electron micrographs of the cells, made in cooperation with Dr. Emil Borysko of the Johns Hopkins University show that these are syncytial and possess some peculiar structures associated with the termination of nerve fibres at the innervated surfaces.

Mr. Stanley Crain has succeeded in recording the bioelectric activity of single nerve cells grown in tissue cultures. The difficulties of this problem, which had hitherto proved insoluble, were overcome by cooperative work under the direction of Dr. Margaret Murray of the Department of Surgery, and Dr. Frederick A. Mettler. The successful outcome is of importance because it provides new methods for the study of the complicated processes of the central nervous system under simpler conditions more amenable to experimental analysis.

An intensive study of several spinal pathways afferent to the cerebellum and of intrinsic cerebellar electrical activity initiated by these pathways has been carried out by Dr. R. M. E. Carrea. The ventral spino-cerebellar tract was definitively characterized as to its origin, course and cerebellar termination. Other studies included the spino-lateral reticular nucleus-cerebellar and the spino-olivo-cerebellar systems, and the interplay of the various afferent pathways in producing cerebellar activity.

Drs. Joseph Fiasconaro and Harold Sherman of the Dental School working in collaboration with the department of Neurology in the Medical School have completed the first stage of their study on dental anaesthetics. Using a special type of stimulator developed in the department and the strain gage digital plethysmograph, they have been able

to characterize quantitatively and objectively the induction time, duration and relative effectiveness of two dental anaesthetics. This study is continuing to examine a series of anaesthetics in order to evaluate their relative clinical usefulness.

Dr. Nachmansohn continued to investigate the molecular forces in the active surface of the proteins of the acetylcholine system. Since it has been established that this system is an integral part of the mechanism by which nerve impulses are conducted, a detailed study of the properties of the proteins promised to yield information useful for the physiology and pharmacology of the nervous system. The development of the last year has borne out this expectation. Dr. Irwin B. Wilson, on purely theoretical considerations of the forces of the protein surface, designed a compound which he postulated would reverse the inhibition of cholinesterase by alkyl-phosphate. This latter action is responsible for the lethal effects of the alkyl-phosphates which are among the most dangerous poison gases known. Dr. Estelle K. Meislich synthesized this compound, N-methylnicotin hydroxamic acid. Using this compound, it became for the first time possible to reverse the action of diisopropylfluorophosphate on cholinesterase, which hitherto was generally believed to be completely irreversible.

Another important example of the usefulness of the studies of molecular forces is illustrated by the work of Dr. Nachmansohn and his associates on the fish. In the study of the electric characteristics of the membrane of electric cells, in which microelectrodes were inserted, and the transmembrane potential measured, significant differences in the reaction to tertiary and quaternary nitrogen compounds were found. The quaternary compounds have a much greater ability to remove the barrier to ion flow across the membrane. These findings have an important bearing on the concept of nerve conduction as well as for the understanding of the mode of action of local anaesthetics, curare-like compounds and other drugs.

Studies on the acetylation mechanism and its relation to other metabolic reactions, which are also important for the understanding of the acetylcholine system, have been carried out by Dr. Max Eisenberg.

A symposium "On the role of proteins in transport of ions across membranes", supported by the National Science Foundation, was organized by a Committee composed of Dr. Hans T. Clarke, Executive officer of the Department of Biochemistry as Chairman, Dr. Robert F. Loeb, Director of the Medical Service, Dr. H. Houston Merritt, Dr. David Nachmansohn and Dr. David Rittenberg of the Department of Biochemistry.

Many outstanding physicochemists and biologists from this country and from Europe attended this conference. Among the guests from this country were Professors Peter W. Debye, John T. Edsall, Henry Eyring, John G. Kirkwood and George Scatchard. The guests from Europe included G. Ehrensvärd from Stockholm, I. J. W. Roughton from Cambridge, Hans H. Ussing from Copenhagen and Hans H. Weber from Tuebingen, Germany. The lectures of the symposium will be published by the Academic Press in a special volume.

Dr. Nachmansohn gave a lecture at the Harvey Society and the Gordon Lecture at Long Island University. He also gave lectures at the Universities of Chicago and Wisconsin and at the Naval Medical Center at Bethesda. He arranged various lectures for European guests: Professors Feodor Lynen from Munich, Hans H. Weber from Tuebingen, Germany, John Z. Young from London and Yngve Zotterman from Stockholm.

Dr. Enrico Cabib from Dr. Leloir's laboratory at Buenos Aires, Argentina, is at present a guest at the Medical School as a Fellow of the Rockefeller Foundation.

The research work of the members of the Neurological Service and the Department at the Medical School was supported by grants to the Hospital from the Association for Aid of Crippled Children, the Benjamin Rosenthal Foundation, and the Variety Club Foundation of New York City; and grants to the Medical School from the Atomic Energy Commission, the Benrus Foundation, Ciba Pharmaceutical Products, Eli Lilly and Company, E. R. Squibb and Sons, the Fougera Company, Ingram Laboratories of Mexico, Lederle Laboratories, the Maltbie Company, Merck and Company, the National Muscular Dystrophy Association, Parke Davis Company, Smith, Kline and French Company, the Teagle Foundation, the United Cerebral Palsy Association, the United States Army, the United States Navy, the United States Public Health Service, the Upjohn Company, Warner-Hudnut Company, and the Wynelite Company. We wish to take this opportunity to acknowledge our sincere appreciation for this generous assistance.

Among the distinguished foreign visitors to the Hospital during the year were Dr. A. Austregesilo, Jr. of Rio de Janeiro, Dr. E. Christiansen of Oslo, Norway, Dr. Deolindo Couto of Rio de Janeiro, Dr. Leonard Cox of Melbourne, Australia, Sir Geoffrey Jefferson of Manchester, England, Dr. B. Noad of Sydney, Australia, Dorothy S. Russell of the Bernhard Baron Institute of the London Hospital, Dr. Carlos Saldias of Lima, Peru, and Dr. Eduardo Tolosa of Barcelona, Spain.

The Neurological Institute was host to its Alumni at the time of the Twenty-Fifth Anniversary Celebration. Approximately 150 Alumni were present to participate in the ceremonies. The Neurological service was greatly pleased that three of its members, Dr. Louis Casamajor, Dr. Henry A. Riley and Dr. Edwin G. Zabriskie were awarded the Distinguished Service Medal for their contributions to the Hospital and the Medical School.

The Neurological Service was again host to the American Board of Psychiatry and Neurology for their examination in December. Approximately 300 candidates were examined. Among those certified in Neurology were staff members Dr. William Amols and Dr. Stanley Lesse.

The Fifth International Congress in Lisbon in September 1953 was attended by many members of the staff. Papers were presented to the Congress by Dr. William F. Caveness, Dr. Arnold P. Friedman, Dr. Alfred Gallinek, Dr. Lothar B. Kalinowsky, Dr. H. Houston Merritt, Dr. Joseph Moldaver, Dr. Maximilian Silbermann, and Dr. Abner Wolf.

It gives me great pleasure to express my thanks to the entire staff for their sincere cooperation throughout the year. Especial thanks are extended to the Administrative and Nursing Staff of the Hospital for their invaluable assistance. We are particularly indebted to Dr. J. Lawrence Pool and the staff of the Neurological Surgery Service for their fine spirit of cooperation in the care of patients and the instruction of the resident staff of the Neurological Service. We also wish to take this opportunity to express our thanks to Dr. Robert F. Loeb and Dr. Rustin McIntosh for their invaluable assistance. The assignment of residents to the Neurological Service by the Medical and Pediatric Services continues to be a great stimulus to the work of the Neurological Service.

NURSING

MARGARET ELIOT, R. N., *Acting Director*

Constant effort for better patient care continues to characterize the work of the Nursing Service. Through the graduate nurse committees, the staff committees and the procurement of excellent graduate nurses it is hoped that this service is coming nearer the goal for which it is striving.

The presentation of the medal for "distinguished service" to Miss Helen Young, Director of Nursing Emeritus, at the time of the Twenty-fifth Anniversary not only honors Miss Young for her work but also reflects on the values of nursing everywhere in an important way.

With Miss Eleanor Lee as chairman, the Nursing Committee for the Twenty-fifth Anniversary made an extremely fine contribution to the celebration. Exhibits, posters and the nursing program, with Miss Margaret Arnstein, P.H. 1928, as the principal speaker, were most interesting and instructive and exemplified a splendid co-operative spirit in the entire group.

The Pauline A. Hartford Memorial Chapel made a beautiful and impressive background for the graduation exercises for the one hundred student nurses in the Class of 1953. Dr. Aura E. Severinghaus, Associate Dean and Secretary of the Faculty of Medicine, Columbia University, made the introductory remarks to the Class, which were followed by an address by Dr. James A. Pike, Dean of the Cathedral of St. John the Divine. For the first time a moving picture in color was taken of the afternoon's proceedings.

Perhaps the most unique contribution to the Nursing Service which has been made during the year was the transfer on October 1 of the so-called "per diem" nurses to the regular staff. Of the 71 graduate nurses interviewed, 61 joined the staff—25 full-time and 34 part-time. Two practical nurses also accepted full-time staff positions.

We are continuing to extend the nursing team as a method of patient assignment. All nursing personnel, graduates, students, practical nurses and nurses aides are prepared through classes and in-service programs to participate as team members.

Another refresher course for graduate nurses was given in March with special emphasis on the nursing care of obstetric patients. Nine graduates completed the course. The Ward Assistant program was carried on during the summer with twenty-four students, 18 women and 6 men, taking the opportunity afforded by this arrangement. Each year many college students apply for this program which has become increasingly

popular and useful. Again this year students in the Division of Nursing Education at Teachers College, Columbia University, have been permitted the use of the Hospital's clinical facilities for field work in the care of medical, surgical, pediatric and obstetric patients. Miss Susan B. Moore and Miss Beatrice Dorbacker, instructors in the Department of Nursing, have been a great help in giving classes to some of our volunteer workers interested in nursing.

Miss Lottie M. Morrison, Assistant Director of Nursing, Sloane Hospital, is exploring the modified "rooming-in" arrangements for patients in the Obstetric Unit. A notable contribution has been made during the year by Miss Margaret A. Hogan in the Sloane Clinic. Miss Hogan is here working in collaboration with The Maternity Center Association and has initiated a program of classes on "Prepared Childbirth."

It has been our pleasure to welcome not only many visitors from the United States but also several nurses from foreign countries, among them being:—Miss Jean Addison, Matron of Guy's Hospital, London, England; Miss Doris Bardsley, President of the Australian Nursing Federation, South Brisbane, Queensland, Australia; Mrs. On-Soon Kim, President of the Korean Nurses' Association, Seoul, Korea; Mrs. Ruth B. Hillenberg, Supervisor of Polyclinics, Rothchild Hadassah University Hospital, Jerusalem, Israel; Miss J. Iris Martin, Supervising Matron to the Gisborne Hospital Board of School of Nursing, Gisborne, New Zealand.

We look forward to welcoming in January Miss Yvonne Hentsch, Director, Nursing Bureau of the League of Red Cross Societies, Geneva, Switzerland. Miss Hentsch has been awarded the second Anna C. Maxwell Fellowship. She will be our guest in Maxwell Hall during her year's study in the Division of Nursing Education at Teachers College, Columbia University.

Delegates from the Nursing Service have represented us at many nursing conferences and institutes:—the National League for Nursing meetings in Cleveland, the American Nurses' Association and League of Nursing Education convention in Buffalo, the National Society for the Prevention of Blindness discussions here in New York City, the head nurse and operating room nurse institutes sponsored by the United Hospital Fund in New York City and the annual Practical Nurse Association meetings. Miss J. Margaret Ada Mutch, Miss Cora L. Shaw and Miss Elizabeth Wilkisson, a student nurse, attended the Tenth Quadrennial Congress of the International Council of Nurses in Brazil and brought back very interesting reports.

On April 16 we were delighted to welcome back from Germany

Miss Dorothy Robinson from her third term of service with the U. S. Army. She resumed her work as supervisor of the Delivery Room. On September 1, Miss Miriam Hubbard, previously on the nursing staff in Babies Hospital, was transferred to be Superintendent of Mary Harkness Convalescent Home, Port Chester, N. Y. Miss Marjorie H. Stewart, Assistant Night Supervisor, resigned in October and Miss Penelope Manning was appointed a member of the night staff.

The Nursing Service is most grateful to the Trustees and the Administration for the increases in the salaries of the supervisors, head nurses and general duty nurses on August 1st. This is a step which keeps us well abreast of the salaries in other hospitals in similar categories.

Mrs. Earl Harkness continues her interest in refurbishing Maxwell Hall and we are delighted with the beautiful new floor in the dining room.

It is with regret we announce the death of Miss Isabel Bishop on August 28. Miss Bishop was for many years Director of Nursing at the New York Orthopedic Hospital before the move to the Medical Center. At the time of her death she was Night Supervisor of the Orthopedic Unit and we always appreciated her loyal support.

Mr. W. E. S. Griswold, Jr., Chairman of the Nursing Committee of the Board of Trustees, accepted with regret the resignation of Miss Marie C. Byron as alumnae representative. Mrs. Allen M. Look, President of the Alumnae Association of the Presbyterian Hospital School of Nursing, has been appointed to fill this vacancy. The committee has met as usual the first Wednesday in each month.

A service was held in The Pauline A. Hartford Memorial Chapel on November 9, in memory of Miss Ruth C. Williams, graduate of P.H. 1917, former Superintendent of the Institute of Ophthalmology, who died September 17, 1953.

During the summer Miss Lee and Miss Eliot had the pleasure of visiting L'Ecole Florence Nightingale in Bagatelle, Bordeaux, France, where Monsieur Mommeje, the Chairman of the Board, called and brought the thanks and appreciation of the Board for all the Presbyterian Hospital has done to help them. The long association with this School dates from Miss Maxwell's help in its organization as a War Memorial for the American nurses of World War I.

Deep gratitude is expressed to the President, the Board of Trustees and the Administration for their understanding and constant support; to the professional staff, sincere thanks for their co-operation; and, to the members of the nursing office staff sincere appreciation for their untiring help and loyalty.

OBSTETRICS AND GYNECOLOGY

HOWARD C. TAYLOR, JR., M.D., *Director of Service*

If a particular characterization is to be sought for the year 1953 in the Division of Obstetrics and Gynecology, it may perhaps be found in the number of changes which have occurred among the staff. Two of the places which must now be filled resulted from the deaths of two of the older and most respected members of the staff. Other losses have been due to the appointment of members of the staff to positions of importance elsewhere, for which one must feel some pride as well as regret.

On March 13, 1953, Dr. Howard C. Moloy, Assistant Attending Obstetrician and Gynecologist, died suddenly while in the Hospital, immediately after the performance of a cesarean section. Dr. Moloy had been a member of the attending staff of the Presbyterian Hospital since the completion of his residency training at The Sloane Hospital in 1934, and had been known throughout the world for his work on the structure and measurement of the female pelvis in relation to the problems of labor. A few months later, on August 30, 1953, word was received of the death of Dr. Eugene S. Coler in England while on active service as Colonel in the Air Force. Dr. Coler was on leave of absence as Associate Attending Obstetrician and Gynecologist, having been a member of the attending staff since 1927. Dr. Coler had been known for his clinical competency in his specialty and for his repeated readiness to give up his practice for duty in the military service of his Country.

The third major loss which the Department is to suffer is a more happy one. Dr. Charles Lee Buxton has been appointed the Professor of Obstetrics and Gynecology at Yale University Medical School, his service there to begin on April 1 of the coming year. Dr. Buxton will be resigning as Attending Obstetrician and Gynecologist to the Hospital, having joined the staff in 1938. Dr. Buxton's work in this Department has been particularly concerned with physiological and clinical problems of fertility in which field he has attained a wide clinical and scientific reputation.

Dr. Susan W. Williamson, Assistant in Obstetrics and Gynecology, has been appointed Director of the Obstetrical Division of the New York Infirmary but fortunately will continue to give some of her time to the Department here.

The Service wishes Dr. Buxton and Dr. Williamson the best of success

and congratulates itself in having supplied the directors of departments to sister institutions.

THE RESEARCH PROGRAM

The research program has been, as always, based upon work done in part in the Presbyterian Hospital and in part in the laboratories of the College of Physicians and Surgeons. Acknowledgment must be made for valuable financial assistance from the American Cancer Society, The Damon Runyon Memorial Fund, The George F. Baker Trust, The Markle Foundation, The Ortho Research Foundation, The MacMillin Fund of the Presbyterian Hospital and the United States Public Health Service. What follows is an account of the investigative work done by the combined efforts of workers in the Hospital and in the College, the majority holding an appointment in each institution.

Problems of Fertility and Endocrinology

The work in this field has continued under the leadership of four men, Professor Earl T. Engle, in general charge of the endocrine laboratories; Dr. Charles Lee Buxton, director of the endocrine clinic; Dr. Joseph W. Jailer, particularly concerned with the physiology and certain of the disorders of the adrenal; and, Seymour Lieberman, Ph.D., the biochemist to the Division in charge of the steroid laboratories. Under the direction of Professor Engle, Dr. Michel Thiery, research fellow in the College, has completed a study of certain aspects of pathological uterine bleeding and has completed a manuscript on Irregular Shedding of the Endometrium. Dr. Anna L. S. Southam with Dr. Buxton carried on studies in regard to the use of certain gonadotropins and other substances in the stimulation of ovulation in anovulatory women.

Under a grant from the United States Public Health Service, Dr. Buxton, in association with Hyman Nadel, Ph.D. and Dr. Southam, has been investigating the bacteriology of the cervix in a search for possible now unrecognized causes of sterility. At a fundamental level of research, Dr. Lieberman, with Samuel Solomon, Ph.D. and Miss Alice Lenz, has begun the study of the biosynthesis of steroid hormones in isolated glands by the use of perfusion and tissue slice techniques with the aid of radioactive carbon.

The important work of Dr. Jailer on types of adrenal cortical dysfunction has continued. From results to date, he is able to differentiate cases of adrenal virilism due simply to hyperplasia of the gland from those due to adrenal tumor. The work of Dr. Jailer and his group seems also to

shed light upon the cause of abnormal hirsutism in women, which it now appears may be due to an enzymatic block within the adrenal gland resulting in the production of atypical steroids having masculinizing effects.

In the field of fertility research, may also be noted the almost spectacular work of Dr. Landrum B. Shettles on human follicular and tubal ova. Dr. Shettles, using phase microscopy, has produced photographs of the unfertilized human ovum, of fertilization by spermatozoa and of the earliest division of the ovum into the two cell stage. Dr. Shettles is continuing his work in this field and is working also on the enzyme systems involved in human fertilization.

Investigation of the relationship between psychological factors, physiological change in the pelvis and gynecological symptoms is being continued under the psychiatrist to the division, Dr. Lothar Gidro-Frank. This work, actually under way for several years, is to be expanded with the aid of a recently received grant-in-aid.

The Physiology of Pregnancy

The changes in electrolyte and water distribution, characteristic of pregnancy, have been the object of study during the past year by Dr. Albert A. Plentl and a group working with him. The work during the last year has included studies, with Dr. Mary Jane Gray, on the variation of the sodium space and the total exchangeable sodium during pregnancy; investigation with Dr. Donald L. Hutchinson on the total body water and water turnover in pregnancy studies with deuterium oxide; and a study of the use of sodium removing resins in the treatment of preeclampsia; as well as work on the exchange rates of water and sodium between material circulation and amniotic fluid, with Dr. Hutchinson and Dr. Earl D. Neslen. These investigations represent a significant beginning toward the better understanding of this very important aspect of the physiology of the pregnant woman.

Further studies on the physiology of pregnancy have concerned the determination of urinary corticoids in pregnancy urine. This work is being carried on by Dr. Lieberman and Dr. Jean Pierre Rosselet under a United States Public Health Service Grant. A study of lipid metabolism in pregnancy is being done by Dr. Robert L. Hallet in collaboration with Dr. Menard H. Gertler of the Medical Service.

The Physiology of Labor

Work on the use of the electrohysterograph has been continued by Dr. Charles M. Steer, Assistant Attending Obstetrician and Gynecologist.

He has continued to study methods for the detection of cases of uterine inertia, particularly those in which the uterine muscle may be expected not to respond to drugs during the course of labor. A study of serum potassium levels in relation to the action of the uterus is being begun. Efforts to correlate the type of the female pelvis, as determined by X-ray pelvimetry, with the outcome of labor, so long the special work of Dr. Moloy, is being continued by Dr. Steer. Another approach to the problem of labor has been the determination of intrauterine pressures by means of a technique known as internal tocography. A research project in this field has been under way during the last year in the hands of Dr. Hallet and Dr. Stephen G. Burgess. Dr. Emanuel A. Friedman, in collaboration with Dr. James A. L. Mathers of the Medical Service, is making ballistic cardiographic determinations during the course of labor in order to study the hemodynamic changes incidental to the effort of parturition.

The Fetus and the Newborn

In association with the clinical work in obstetrics, a project has been begun in the College, under Salome Gluecksohn Waelsch, Ph.D. and Professor Engle, concerned with the mechanism of genetically controlled embryonic death during early pregnancy. This is a laboratory project, but is perhaps a first step toward the investigation of one of the major causes of fetal loss, namely, congenital anomalies.

A comprehensive study of over four thousand cases of toxemia of pregnancy, seen in The Sloane Hospital over a twenty year period, has been completed by Drs. Taylor, Alvin J. B. Tillman and Joseph Blanchard, with the particular intent of determining the probability of intrauterine fetal loss in this condition. On the basis of such experience it is hoped that the time when labor should be induced in order to save the fetus may more consistently be predicted in time to take necessary preventive measures.

Dr. Steer has made a clinical study of the changing causes of fetal loss over the years at The Sloane Hospital and is taking over from Dr. Buxton the study of pregnancy wastage due to blood group incompatability in association with workers in outside institutions. Professor Engle was editor of a recently published comprehensive review of this subject entitled Pregnancy Wastage.

Research in Gynecologic Cancer

With the aid of a number of grants to the College of Physicians and Surgeons, made by the American Cancer Society, The Damon Runyon

Memorial Fund and others, research on hospital patients with gynecologic cancer has been particularly active. This has developed in several fields.

Under the direction of Dr. Lieberman, the study of the relationship of the steroids to cancer has been continued. During the last year this has been concerned with the ketosteroid excretion of adrenalectomized patients and those treated by testosterone and progesterone. This work is being done in association with Ulrich Weiss, Ph.D. and Mrs. Phyllis Garland. A new approach which has just been made is the study of steroid excretion in cancer patients with the aid of steroids labeled with radioactive carbon. This work, under Dr. Lieberman's direction, is being done in association with Dr. Solomon and Mr. George Broussalian.

An entirely different approach is that concerned with the study of degrees of differentiation in adenocarcinomas, particularly that of the ovary and endometrium. It has been shown by Margaret Long, Ph.D. that considerable consistency exists in the structure of any given carcinoma of these organs throughout its extent so that individual cancers may be classified according to their grades of malignancy. The project is directed toward the determination of the chemical changes which must underlie the different morphological structures of the several grades of malignancy. Samples of each specimen after grading are sent to a laboratory in The Francis Delafield Hospital where Dudipala V. N. Reddy, Ph.D. measures chemically nucleic acid content and Helena deRoetth, Ph.D. is studying tissue respiration and other qualities. This research project has also been extended to include collaboration with Dr. Michael Kopac, of the Department of Biology at New York University Washington Square College, who has developed special techniques for the study of the individual cell. This entire project regarding malignancy as a quality which may vary quantitatively, instead of as a specific entity, seems capable of extensive development.

Dr. Saul B. Gusberg and his group have continued to investigate the methods for determining the radiation responsiveness of cancer of the cervix. The treatment of cancer of the cervix is at present extremely controversial, there being no general opinion as to whether a radiation or a surgical plan is preferable. It is hoped that proper techniques may be developed so that individual cases susceptible to radiation may be recognized and so treated, whereas radioresistent cases may be subjected to surgery. An early, preliminary report is expected.

A final note may be made of the work of Dr. Salim Dalali, a research fellow in the College of Physicians and Surgeons, who has developed, with Dr. Arnold L. Bachman of The Delafield Hospital, a method of demonstrating by X-ray the veins of the pelvis.

Analysis of Clinical Casework

The important phase of investigation concerned with the statistical analysis of actual clinical work and of routine laboratory work has continued. Drs. D. Anthony D'Esopo, Attending Obstetrician and Gynecologist, and Arnold N. Fenton, Assistant Obstetrician and Gynecologist, continue their work on problems of urinary stress incontinence and their treatment. Dr. Harold Speert, Assistant Attending Obstetrician and Gynecologist, has published papers on the significance of bleeding early in pregnancy and on the possibility of pregnancy following repeated abortion. Drs. Equinn W. Munnell, Assistant Attending Obstetrician and Gynecologist, and Ferdinand H. Flick, Assistant Resident, have been working on a review of 500 cases of menometrorrhagia. Dr. Plentl has reviewed the problem of breach delivery and has analyzed the results reported particularly in the foreign literature on the value of the Bracht maneuver. Dr. Hallet, Resident, has been studying the conduct of labor and the results when patients are treated with continuous caudal anesthesia. The follow-up organization for the review of the results of gynecological surgical treatment is being inspired by the development of a special clinic by Dr. David B. Moore. These may be taken simply as examples of the constant work in progress in a clinical department which is concerned with the checking of past experience in order to set up improved future methods of management.

STAFF CHANGES

The deaths of Drs. Howard C. Moloy and Eugene S. Coler, the appointment of Dr. Charles Lee Buxton to the Professorship of Obstetrics and Gynecology at Yale University and the appointment of Dr. Susan W. Williamson as Director of the Obstetrical Division of The New York Infirmary have already been noted. Other changes have, however, to be reported.

Dr. Byron C. Butler, Assistant Attending Obstetrician and Gynecologist, has resigned in order to move to Phoenix, Arizona. Dr. John W. Roy, Assistant in the Vanderbilt Clinic, has also resigned in order to devote his full time to practice in Morristown, New Jersey.

On July 1, 1953, Dr. Albert A. Plentl, after completing the residency on this Service, was appointed Assistant Professor of Obstetrics and Gynecology and Assistant Attending. He will serve on the so-called modified full-time basis. His addition to the staff promises to add greatly to the scope of the research program. Dr. Anna L. S. Southam

was made an Assistant on July 1, 1953 and is devoting the current year to full-time research, in association with Dr. Buxton, on problems of fertility. It is expected that she will continue, in the future, taking over much of the research program in the field of sterility after his departure.

Two members of the resident staff have recently received appointments to the staffs of other teaching institutions. Dr. Stewart A. Fish, after leaving the Department in July, 1953 and taking a brief period of additional training elsewhere, is to become Assistant Professor of Obstetrics and Gynecology at the Southwestern Medical School of the University of Texas in Dallas. Dr. William C. Billings, who will leave the residency staff here in July, 1954, will go immediately to be Instructor in Obstetrics and Gynecology at Yale.

During the last year there have been six visiting fellows from abroad, four from Belgium, one from Zurich and one from Colombia, working in the College laboratories but without hospital appointments. Two research fellows have been in a similar position. There have been seven visiting scholars from abroad and a long list of registered visitors.

EXTRAMURAL ACTIVITIES

About thirty lectures or reports have been presented before societies outside of the Hospital by members of this Service. Among those outside activities may be noted the attendance by Salome Gluecksohn Waelsch, Ph.D. at the International Congress of Genetics at Bellagio, Italy and a lecture given by Dr. Saul B. Gusberg at the Curie Institute in Paris. Four members of the Service presented papers or discussions before the annual meeting of the American College of Surgeons. Dr. Buxton has served as co-chairman of the section on gonads, sex hormones and gonadotropins at the meeting of the Endocrine Society and is continuing to act as assistant secretary of the New York Obstetrical Society. Dr. Taylor was the guest speaker at the annual meeting of the Central Association of Obstetricians and Gynecologists in Houston. Professor Engle is at present President of the Endocrine Society and Dr. Taylor is President-elect of the American Cancer Society.

CLINICAL REPORT

The clinical work of the Service is summarized in the following brief tables which show trends that have taken place during five year periods since 1935.

The total number of deliveries for the year 1953 was 3,768 (Table #1). This figure has remained relatively consistent for the last few

years there being, however, some tendency for the semi-private to increase and the private to decrease.

For the second year in succession, no maternal deaths occurred in the Sloane Hospital. It is also noteworthy that the fetal mortality, i.e., still births and deaths of infants within the first thirty days of life, was the lowest by a small figure that has yet been attained in this institution. (Table #2).

The gynecological operations (Table #3) numbered 1,900 which represented a slight increase over last year's total. During the period since 1935, there has been a general increase in the number of operations performed in each category, the largest being recorded in the semi-private group.

I. Deliveries

	1935	1940	1945	1950	1953
Ward	1,622	1,495	1,701	2,321	2,328
Semi-Private	294	427	576	637	883
Private	405	528	686	671	557
Total	2,321	2,450	2,963	3,629	3,768

II. Fetal Mortality

	1935	1940	1945	1950	1953
Ward	42.8/M	36.3/M	41.8/M	24.9/M	17.4/M
Semi-private & private	26.8/M	26.2/M	32.5/M	21.4/M	22.2/M

(/M per 1,000 live births)

III. Gynecological Operations

	1935	1940	1945	1950	1953
Ward	564	647	672	754	899
Semi-private	126	174	182	177	544
Private	204	381	454	604	457
Total	894	1,202	1,308	1,535	1,900

COMMENT

The several losses which the staff of the Service of Obstetrics and Gynecology has suffered in the last year raise acutely the general question of recruitment of new personnel. The problem of this Service is in some senses a special one, but in many it is shared by other services of the Medical Center.

Obstetrics and Gynecology has been a specialty for a long time, but a highly organized one for only a short period. The recent more general acceptance by the laity of the specialist in this field has created a great

demand for fully qualified physicians to work in various communities of the Country that have previously not depended upon specialists for this type of work. It may be predicted that the demand for such highly trained specialists will be a cause for a constant attrition of the staff of the Service of Obstetrics and Gynecology.

The problem can be solved only by attracting a sufficient number of graduating physicians, with the special talents required by the Presbyterian Hospital, into the residency program to compensate for these inevitable future losses. This appears to be a need common to all units of the Hospital.

At least five years are required to train a doctor to fill a clinical post on the staff of the Hospital. The needs then should be visualized at least five years in advance. From the standpoint of Obstetrics and Gynecology, one of the principal problems facing the Medical Center is that of the constant replenishment for its staff. This replenishment must be planned for years in advance of the date of its absolute necessity. A study of the sources and distribution of the personnel for its future services seems to present a special opportunity and indeed to be a present obligation for the Medical Center.

OPHTHALMOLOGY

JOHN H. DUNNINGTON, M.D., *Director*

This year has been a busy one for both the Institute of Ophthalmology and Vanderbilt Clinic. There were 2,728 admissions to the Institute and 2,539 operations were performed. The clinic visits numbered 28,580. No radical changes have occurred during this period. The personnel has remained the same except for the addition of Dr. Andrew de Roetth, Jr. as Assistant in Ophthalmology. We are justly proud of the permanency of our staff.

It is with genuine sorrow that we record the death of our former superintendent, Miss Ruth C. Williams, whose long years of tireless service and loyal devotion played such an important role in the development of this Service.

We have had ten visiting scholars from the United States and six foreign countries studying with us during the past year. The following distinguished visitors have addressed our staff: Mr. Frank Law, Guy's Hospital, London; Mr. A. Seymour Philps, Moorfields, London, England; Mr. H. B. Stallard, Moorfields and the Institute of Ophthalmology, London, England; Col. J. H. King, U.S.M.C., Washington, D.C.; Dr. Norman Ashton, Institute of Ophthalmology, London, England; Dr. Maurice Langham, Institute of Ophthalmology, London, England; and Dr. V. Everett Kinsey, Kresge Eye Institute, Detroit, Michigan. To them we are indebted for most stimulating and informative presentations.

Chief among the new honors which have been conferred on the members of our staff is the Distinguished Service Award to Dr. Arnold Knapp at the Twenty-fifth Anniversary Celebration of the Columbia-Presbyterian Medical Center. His mature judgment and sage advice have been of inestimable value to this Service, so we happily salute him on the receipt of this richly deserved honor. Dr. Ludwig von Sallmann was awarded a diploma of Docteur Honoris Causa by the University of Marsaille, France, and was guest of honor and read the official address at a special meeting of the Ophthalmological Society of Vienna. Dr. Algernon B. Reese is President Elect of the American Academy of Ophthalmology and Otolaryngology, and was guest of honor of the French Ophthalmological Society and guest speaker at the meeting of the Irish Ophthalmological Society. Dr. Robert L. Wiggins was awarded the Degree of Doctor of Medical Science from Columbia University. Other members of the Service have continued to hold important positions in national ophthalmological societies

and contributed freely to their deliberations. Most active participation has been in the affairs of the American Academy of Ophthalmology and Otolaryngology where ten members of this Service gave instructional courses at its meeting in Chicago, October 11 to 16. At this same meeting Drs. Raymond L. Pfeiffer and Ira S. Jones presented a paper on Roentgen Diagnosis of Lacrimal Gland Tumors and Dr. Arnold W. Forrest one on Lacrimal Gland Tumors: Prognosis As Determined by Pathology. Drs. Jones and Forrest also had a scientific exhibit on lacrimal gland tumors for which they were awarded second prize.

The research activities have been both basic and clinical. Most of the basic projects have been done under the auspices of Columbia University and the results have been recorded in its departmental report. Among these were Dr. von Sallmann's studies on radiation cataract, which have shown that deuterons and alpha particles are more injurious to the lens than X-rays of similar dosages. Furthermore, it was found that the peripheral portion of the lens is less affected by ionizing radiation than is the small central germinative zone. It has also been shown that a surface dose of 5000 rep of beta irradiation causes cytological and biomicroscopic damage to the rabbit lens. These laboratory findings are of great importance to the radiotherapy department. Similarly the studies conducted by Dr. von Sallmann in collaboration with Drs. Wiggins and Anthony Donn on Absorption of Blood from the Vitreous have clinical significance. Dr. Devorah L. Khorazo's collaboration with Dr. Seymour P. Halbert, bacteriologist assigned to ophthalmology, in the investigation of antibiotic producing bacteria, is but another illustration of the intertwining of the hospital and college staffs. Their studies have shown not only the presence of such bacteria, but also a definite seasonal variation in their concentration. Working under a grant from the Mary A. Harriman Fund, Dr. Otto Lowenstein with the aid of Dr. Sean B. Murphy, completed experimental studies on the pupillary light reflex pathways.

The clinical investigations conducted during the past year include those of Dr. Dunnington, who in collaboration with Dr. Ellen F. Regan, has published in the American Medical Association's Archives of Ophthalmology the results of experimental studies on Absorbable Sutures in Cataract Surgery. These data formed the basis of the Bedell Lecture given at Wills Hospital, Philadelphia, Pennsylvania, on March 20, 1953. Encouraged by their laboratory findings mildly chromicized catgut is being used with satisfactory results in routine cataract operations. Dr. Reese and his co-workers have combined forces with several other large institutions in their studies on retrolental fibroplasia. They have

devoted most of their efforts towards evaluation of the role oxygen plays in the production of this disease. Even though this project has been organized only a few months it is already quite evident that the amount of oxygen to which the premature infant is subjected has an important bearing on the frequency of this disease. The great significance of this finding is shown by the 107 new cases of retrolental fibroplasia examined during the past year by Doctor Reese and his staff. Dr. Reese, with the assistance of Drs. George R. Merriam, Arnold W. Forrest, and Dr. George Hyman of Delafield Hospital, has instituted a new treatment for retinoblastoma consisting of the oral administration of triethylene melamine (TEM) in combination with high voltage x-rays. This form of therapy has been employed on nineteen patients with bilateral retinoblastoma. The results to date are most encouraging.

The glaucoma clinic has been most active during the past year. Dr. Willis S. Knighton, with the support of the Whitehall Foundation, is conducting clinical studies on this disease as is Dr. de Roetth, who is working under the auspices of the Sloan Foundation. Dr. de Roetth, through his experimental investigations on the metabolism of the ciliary body, has provided further biochemical evidence that the aqueous humor is formed partly as a secretion by the ciliary body. Information about the formation and drainage of the aqueous humor is of prime importance in glaucoma because in this disease there is a disturbance of the normal interchange of this fluid. By means of the aqueous outflow test these investigators have shown that in chronic noncongestive glaucoma there is a definite interference with the outflow of this substance. Various measures to correct this difficulty are being assessed, as are procedures designed to decrease the formation of the aqueous humor. From correlation of such laboratory and clinical data it is anticipated that a clearer concept of therapy will emerge. Similarly the orthoptic clinic under the direction of Drs. Maynard C. Wheeler and Philip Knapp is analyzing the role of orthoptics in strabismus. Both of these clinical problems are slow of solution, but worthy of prolonged study. The department of aniseikonia has conducted a comparative study on the reliability of the space eikonometer and the ophthalmo-eikonometer. It is felt, that since more consistent readings are obtained with the ophthalmo-eikonometer this method of examination is preferred. Over 500 aniseikonic examinations were made during the current year, which attests the limited but definite field of usefulness of this test.

The John M. Wheeler Library, under the able direction of Miss Nora Lock, has continued to serve a most useful and stimulating role in the

Institute. The accessability of the 6,473 bound volumes in our library makes it possible for the entire staff to use it, as evidenced by the 2,908 readers who registered during the past year. In addition, the 130 periodicals serve to maintain the staff's interest in current ophthalmic literature. During the past year the staff has had published thirty-one papers on various subjects. Dr. Reese prepared the fascicle Tumors of the Eye and Adnexa published by The Armed Forces Institute of Pathology for the National Research Council.

The routine clinical activities of the service have continued with little change. The wards still furnish adequate teaching material in spite of the inroads made by the ever increasing insurance coverage. Closer relationship between this Service and those of neurology, pediatrics and medicine, has resulted in greater clinical material available for presentation at ward rounds and we are most appreciative of this cooperation. In the Friday afternoon seminars greater emphasis has been placed on correlating the research and clinical activities of the Institute.

To the many benefactors of the Service sincerest thanks are extended. Their loyalty and continued interest in our welfare is most heartening and greatly appreciated. Grants-in-aid have continued to supply most of the funds for our researches. We are deeply indebted for their generous support to: The Dunlevy Milbank Fund, The Mary A. Harriman Fund, The Whitehall Foundation, The Sloan Foundation, The Snyder Fund, The Marie Heye Clemens Fund, The National Council to Combat Blindness, Inc. Fund, and several others who wish to remain anonymous. To them all of us are most grateful. The friendliness, cooperation and industry of the entire staff, both professional and non-professional, has continued, so the year of 1953 has been a most pleasant and useful one.

ORTHOPEDIC SURGERY

ALAN DEFOREST SMITH, M.D., *Director*

The use of material from the Bone Bank is becoming increasingly important in orthopedic surgery. The Bank has been in operation for more than six years, but the amount of material stored has never been sufficient. The bank bone is used for grafts and for filling cavities caused by cysts, tumors, etc. in bone. By using bank bone the length and severity of the operations is decreased and in some instances, in which it would be impossible to remove the bone required from the patient himself, it has made surgery possible where it otherwise would not be. The source of bone deposited in the bank has been largely that removed at various orthopedic operations, and ribs which are removed in the course of operations on the thorax. In order to augment this material a plan is being developed for the removal of bone in certain carefully selected cases at autopsy. It is, of course, necessary to obtain the consent of the relatives in order to do this and there are other restrictions which narrow the possibility to a relatively few cases. The Surgical Service also is interested in obtaining material for blood vessel grafts and cartilage for plastic surgery in these same cases and the program is being worked out in conjunction with them. During the year from December 1, 1952 to December 1, 1953, 162 different lots of bone were accepted for the bank and from these 160 grafts were used in 136 patients.

Dr. C. Andrew Bassett, an Annie C. Kane Fellow at the New York Orthopaedic Hospital, is in charge of this program. He had wide experience in this field at the Bethesda Naval Medical Center, where a very well-developed program has been completed for the procurement and storage of bone. Dr. Bassett is also conducting a research project to study the behavior of human bone cells in tissue culture and has been able to demonstrate that under certain conditions osteoid or bone-like substance is produced by these cells in culture. He plans to enlarge this study in an effort to develop other material which may be used in place of bone for certain purposes.

The research program in the Histochemistry Laboratory which was developed by the New York Orthopaedic Hospital has been greatly expanded during the past year. The laboratory was established by the use of the Research Fund of the Orthopaedic Hospital and operates

under the College of Physicians and Surgeons. It is under the general supervision of Dr. Raffaele Lattes of the Surgical Service and is under the active direction of Dr. Gabriel C. Godman. Work in the laboratory has been supported also by grants from the Jane Coffin Childs Fund and the Damon Runyon Cancer Fund, which also has granted Dr. Godman a Research Fellowship. An additional grant to support the work done by Dr. Bassett has been promised by the United States Navy. Much of the equipment in the laboratory also was obtained on lease from the Navy.

Dr. Godman has been interested especially in the repair of skeletal muscle and has been able to demonstrate that muscle has greater properties of repair than had previously been believed. This research has many ramifications some of which have been completed and others of which are still under investigation.

Dr. Charles A. Ragan, Jr. of the Medical Service and his associates have been carrying out research on certain phases of connective tissue activity which are related in many ways to the work being done on muscle and bone cells. Dr. Ragan's researches also have been supported by grants from several foundations.

Among the clinical investigations which have been carried out by the Staff is the presentation of an end-result study of a series of one hundred spine fusion operations for tuberculosis. This represents a long-term result and was presented by Dr. Halford Hallock and Dr. James B. Jones to the American Orthopaedic Association at its meeting in June. Dr. D. Keith McElroy and Dr. Daniel M. Winters are bringing to a conclusion their study of the effect of isonicotinamides in bone and joint tuberculosis. This was undertaken primarily to determine the comparative effects of ipro- and isonicotinamide. Drs. William R. MacAusland, Jr. and John J. Gartland, Jr. read a paper at the meeting of the American Academy of Orthopedic Surgeons on the Uses of Hyaluronidase in Orthopedic Surgery. Drs. Alan DeForest Smith, William H. von Lackum and Dr. Robert H. Wylie, the latter of the Surgical Service, presented a new method for stapling of the vertebral bodies in cases of scoliosis to the American Orthopaedic Association.

The close cooperation between the orthopedists and the members of the Neurological Surgery Service continues and in many instances patients are treated conjointly by these two Services.

The overlap between orthopedic and neurological surgery is illustrated by the studies of Dr. James B. Campbell of the Neurological Surgery Service on a number of different conditions found in children in the orthopedic clinic.

On the Fracture Service Dr. Charles S. Neer, II has developed a prosthesis for use as a substitute for the head of the humerus in several conditions including fractures and tumors. Intramedullary nails have been used in a number of cases of pathological fractures of the femur. Work is still in progress on a number of other projects which will be completed in the near future.

Among visitors to the New York Orthopaedic Hospital was Dr. P. K. Duraiswami of India, who gave a very interesting lecture on the production of various deformities in chicks.

Dr. Frank E. Stinchfield made an inspection tour of Army orthopedic facilities in Europe as a consultant to the Surgeon-General. Dr. Smith attended the joint meeting of the Brazilian and Latin American Orthopedic Associations in Brazil and presented a paper on the treatment of bone and joint tuberculosis.

Drs. Everett C. Bragg and Melvin B. Watkins have been placed in active charge of the Orthopedic Clinics. Dr. Hallock retains his position as Chief of Clinic, and he and the other Attending Surgeons on the Orthopedic Service act in the capacity of Consultants.

Dr. George B. Ambrose was appointed Assistant Attending Orthopedic Surgeon and Instructor in Orthopedic Surgery in the College of Physicians and Surgeons on October 1, 1953. Dr. Fred J. Knocke resigned as Instructor in Orthopedic Surgery on November 1, 1953.

The statistics of the Out-Patient Department show that 6,848 new patients were seen and that 30,848 patients made return visits. In the wards of the hospital 1,253 patients received 29,260 days of treatment.

OTOLARYNGOLOGY

EDMUND P. FOWLER, JR., M.D., *Director*

1953 was not only the Twenty-fifth Anniversary of the Medical Center, but also of the Ear, Nose and Throat Service at the Presbyterian Hospital. To signalize this, an exhibit was prepared, showing twenty-five years of changes in the specialty. The exhibit consisted of teaching moving pictures, "open house" in the speech and hearing clinic and endoscopic suite, as well as listings and demonstrations of the multifarious activities of the Service through the years.

Of particular interest is a comparison of the total number of operations in 1933, when the Service had functioned for more than a year at its present capacity, shown below:

	1933	*1953*
Admission	1,787	3,293
Operations	1,598	3,032

The number of tracheotomies has increased, largely because of its use in poliomyelitis, myasthenia gravis, and brain injuries, or simply for safer operative work about the head and neck. The number of simple mastoidectomies has decreased, but to replace them, there are many more radical mastoidectomies, not to mention the fenestration operation to save hearing, or to prevent violent attacks of vertigo. Cancer surgery, which was largely limited to the larynx in 1933, has been expanded and been found to have its successes and palliative value in massive block removal in many parts of the head and neck, especially when combined with modern radiotherapy. Lastly, endoscopy, which was largely for foreign bodies in 1933, is now a routine diagnostic procedure.

The retirement of Dr. James W. Babcock, who has been with the Service since its inception and has done yeomen's service as Chief of Clinic, often acting as Executive Officer, is reported with regret as is the resignation of Dr. Edward Opin.

During 1953, Dr. Franz Altmann was elected a member of the American Otological Society, and a member of Sigma Xi.

Dr. Fowler has taken part in two symposia on Headache, under the Chairmanship of Dr. Harold Wolff, one before the American College of Physicians in Atlantic City, and the other before the West Side Clinic Society in New York. With Dr. Milos Basek, he delivered a paper before the joint sections of Otolaryngology and Pediatrics, at The Academy of

Medicine, on Causes of Deafness in Children. Before The American Otological Society in New Orleans, he reported on Use of Intravenous Procaine in Ménière's Disease, and Some of the Basic Physiology Involved in the Use of Procaine Intravenously. Before The American Academy of Ophthalmology and Otolaryngology, Dr. Fowler gave a paper on Management of Chronic Ear Infections. The basis for the paper was a compilation of many years of bacteriological and antibiotic sensitivity studies, done with the cooperation of the Department of Surgery, and collated by Dr. Richard J. Freeman.

Dr. Fowler, Dr. Robert M. Hui, and Mr. Donald Markle, were instrumental in developing a plan for the care of the deaf and hard of hearing children in the City of New York for the Board of Health. Outside community activities also included a popular talk at Columbia University, entitled What You Should Know About Deafness, in the course, Ways to Better Health.

Dr. Herbert S. Friedman gave two talks in Switzerland on New Techniques in Rhinoplasty, one at the University of Zurich, and one before the Zurich Medical Society, in July, 1953.

Dr. Albert R. Kolar established a library of X-rays of the human body at the Department of Anthropology, The American Museum of Natural History. Forty thousand films have been collected, and selections have been made from them.

Dr. Jules G. Waltner delivered a paper on Otolaryngological Sources of Pain, at the Twenty-fifth Anniversary of the Columbia-Presbyterian Medical Center. He has published in the New York State Dental Journal a summary, entitled Progress in Otolaryngology. He is collecting material on the problem of epithelialization of radical mastoid and fenestration cavities. A paper on Choanal Atresia is being prepared.

Dr. DeGraaf Woodman gave a paper with a sound track movie, showing a new technique for the treatment of laryngeal stenosis, which was given before The American Triological at New Orleans. This was recently published in the Laryngoscope. He also conducted a survey in this country and abroad on arytenoidectomy, for relief of laryngeal paralysis, which resulted in a report from ninety surgeons, who have used his technique on 521 cases. The results showed better than 91 per cent. This paper was published in the August, 1953, Archives of Otolaryngology. He is continuing his research on paralysis and voice rehabilitation with combination of surgical techniques and speech therapy, as well as research in fenestration and on congenital atresia of the ear. Dr. Woodman was elected a member of the American Otological Society, and made Secretary

of the Ear, Nose and Throat section of The New York Academy of Medicine. He has also been appointed Acting Chief of the Head and Neck Tumor Team in Presbyterian Hospital.

William H. Appell, Ph.D. has been appointed a research assistant to study the psychosomatics of Ménière's Disease, otosclerosis, and glaucoma. Concomitantly, with the help of Dr. William H. Sheldon and his Department, these same diseases are being studied from the standpoint of Constitutional differences. Dr. Adolf Zeckel, from the Department of Psychiatry, is in charge of the psychiatric ramifications of this project and is being assisted by Dr. Dorothy Loynes and Mrs. Zeckel.

Mrs. Shulamith Kastein, Speech Pathologist, of the Speech and Hearing Clinic, gave the following lectures: Language and Speech Development in Children with Cerebral Palsy, at the Cerebral Palsy Center, Suffern, New York, Diagnosis and Management of the Hard of Hearing Child, with Miss Sylvia Morgan, also of the Speech and Hearing Clinic, and Certain Psychological Processes of the Brain Injured Child, at the New York Society Speech and Voice Therapy; Language and Speech Problems in the Mentally Retarded Child, and Development of Language in Children with Mental Retardation, at the Association for the Help of Retarded Children; Language and Speech Problems in the Exceptional Child at the School for Exceptional Children. She was also on the panel, The Cleft Palate Problem, with Dr. Maurice J. Hickey and Dr. Sebastian Bruno, at a special meeting here at the Medical Center, and on the panel, Pushing Exercises, with Dr. Emil Froeschels and Dr. Deso Weiss before the New York Society for Speech and Voice Therapy.

Mr. Donald Markle, Supervisor of the speech and hearing clinic, spoke at the annual convention of the American Speech and Hearing Association on a panel dealing with the problems of Hospital and Rehabilitation Agency Speech and Hearing Clinics; with Dr. James Lees, he published a paper in New York State Medical Journal, on Streptomycin and Deafness.

During the Anniversary, many Alumni returned to the Department, and attended the banquet at the Waldorf-Astoria. There were two other formal Alumni meetings, one in the Spring here at the Medical Center, when an afternoon was devoted to scientific and clinical subjects, and another in Chicago in conjunction with the Chicago meeting of the American Academy of Ophthalmology and Otolaryngology in October. These contacts with the Alumni are particularly enjoyed by the current Residents. From the questions asked by the men in practice throughout the Country, the Residents obtain a broader perspective of their specialty

and are encouraged as to the opportunities available to them. Never has there been so much demand for well-trained Otolaryngologists, and, apparently, the Service here is turning out the best-rounded men in the Country.

The Department gratefully acknowledges the contributions to clinical research in Otolaryngology, made to the hospital by the Hayden Foundation for the Coakley Memorial Clinic, and through Columbia University, by the Abbott Laboratories, the Doho Chemical Company, the Eli Lilly Foundation, the Upjohn Company and the Philip Hansen Hiss Memorial Fund.

PATHOLOGY

HARRY P. SMITH, M.D., *Director*

The Pathology Service of the Presbyterian Hospital includes a Division of General Pathology, as well as specialized divisions of Neuropathology, Pediatric Pathology, and Orthopedic Pathology. Corresponding divisions, with the same professional personnel, exist in the Pathology Department of Columbia University. The Division of General Pathology has major responsibility for undergraduate instruction of medical students, dental students, nurses, and students in physical education and rehabilitation. The organization of curricula is mainly the responsibility of the University, but the teaching material from the autopsy rooms and wards of the Hospital is indispensable. The autopsy room and the conference room also provide a common meeting ground for pathologist and clinician. Here the interns, residents and staff are brought together in the evaluation of diagnosis and therapy in specific cases. Theory and practice are thus brought together in the common purpose of elevating educational standards and in the improvement of patient care. At this point we see a complete functional merger of University and Hospital activities, with no distinction in purpose or method.

In the field of research, the University tends to sponsor fundamental types of research, often on animals. The results of fundamental research provide the basis for new clinical and laboratory procedures for diagnosis and treatment of human disease. For example, Drs. Joseph E. Flynn and Robert W. Coon of the Division of General Pathology are engaged in fundamental studies on the coagulation of blood. They have reported outstanding progress in separating the various clotting factors from each other. By use of simplified systems, they have made notable progress in determining the order and method by which they interact in the formation of a clot. By virtue of this fundamental research, they and Dr. Vincent P. Perna are now enabled to devise assay procedures which permit them to measure the fluctuations of these factors in health and disease. More and more, they are being called into consultation to help solve troublesome problems encountered in the care of human "bleeders." This example is cited to illustrate the way in which fundamental research progresses, step by step, from the abstruse realm of theory to application in the doctor's office and at the bedside of the patient. It is a very effective arrangement whereby the University assumes primary responsibility for fundamental research, and the Hospital for "developmental"

research, and patient care.

The fundamental research of Dr. Wellington B. Stewart on iron metabolism, carried out under the auspices of the University, is also of great importance to the clinician, for it helps to clarify the factors concerned in the absorption and excretion of iron by the body. It also helps to clarify the problems of iron storage in the tissues, and its utilization in the formation of red blood cells. These studies are of interest in their own right, from the academic point of view; however, they also help to form the foundation for application in the field of anemia and in other disorders of pigment metabolism.

Dr. Stewart, in collaboration with Dr. M. E. Shils of the School of Public Health, have conducted animal experiments with diets poor in certain vitamins, but rich in corn. The results, still preliminary in nature, are suggestive of certain analogous disturbances in human nutrition. This illustrates an analytical method which can be carried out on animals, to provide important clues in the prevention and treatment of disease in man—but just which disease and just which form of treatment may not be apparent at the early stages in such a piece of research.

The research of Dr. Joseph Seronde, Jr., carried out as a basic project of research in the College of Medicine, indicates a clear-cut relation between vitamin deficiency and certain spontaneous infections in rats. No one would attempt to apply these results directly to man; indeed the particular microorganisms concerned do not even produce disease in man. It can be hoped, however, that the principle will be broad in its application, and that methods will be developed to detect analogous relationships in human disease. Once these relationships are discovered, the methods of prevention or cure may be entirely obvious.

The sub-specialties of Neuropathology, Orthopedic Pathology and Pediatric Pathology are involved in undertakings similar in principle to those of General Pathology. The emphasis on undergraduate instruction is less, but the emphasis on instruction of interns and residents is correspondingly greater. Their research often involves direct and close collaboration with members of the corresponding clinical departments. In part, this research is a Hospital function and is concerned predominantly with developmental research. In part, however, the research is of a fundamental type—in which case the University tends to play the dominant role. In the Division of Neuropathology Dr. Abner Wolf is continuing his experimental work on disseminated encephalomyelitis in monkeys. Dr. David Cowen, in the same laboratory, has made further contributions on adult toxoplasmosis. Dr. Eleanor Roverud has con-

ducted studies on experimental amyloidosis in the nervous system of hamsters infected with Leishmania donovani.

In the Division of Orthopedic Pathology, Dr. C. Zent Garber has synthesized a compound of a type found in giant cell tumors of man, and has made a study of the tissue responses it provokes in animals. He has also collaborated with Dr. Bernard Cooperman from the Orthopedic Service in studying the effects of irradiation in home repair.

In the Division of Pediatric Pathology, Dr. Dorothy H. Andersen has continued her studies on the celiac syndrome of infants and children, with generous financial support by the United Fruit Company, the Whitney Fund and the Frankel Fund. She has collaborated with Dr. Katherine K. Merritt in a study of the effects of maternal disease on the fetus and infant, and with Dr. Paul A. de Sant'Agnese in his study on electrolytes in cystic fibrosis of the pancreas.

Several members of the Pathology Service have made noteworthy contributions outside the walls of the Medical Center. Dr. Wolf visited medical centers in Europe and attended the Fifth International Neurological Congress in Lisbon, where he gave reports on toxoplasmosis and Chronic Infantile Wernicke's encephalopathy.

Dr. Joseph E. Flynn has participated in numerous scientific programs throughout the country, including those of the American College of Physicians, the College of American Pathologists and several regional societies and universities. He is now serving as Chairman of the Committee on Standardization of Prothrombin Assay, as established by the American Heart Association, and the American Society of Clinical Pathologists. Dr. Smith has completed a two-year term as Secretary-Treasurer of the College of American Pathologists and a six-year term as Governor of the same organization.

It is with regret that we announce the retirement of Doctor Beryl Paige, of the Division of Pediatric Pathology, effective July 1, 1953. Her long period of fruitful service is appreciated by all of us.

The ratio of necropsies to deaths for the year ending December 31, 1953, is submitted as follows:

Services	*Autopsy Percentage*	*Services*	*Autopsy Percentage*
Babies Hospital	80	Orthopedic Surgery	33
Harkness Pavilion	45	Otolaryngology	100
Medicine	56	Surgery	65
Neurological Institute	50	Urology	32
Obs. & Gyn.: Adults	50	Vanderbilt Clinic	75
Neonatal	57		
		Average	59

PEDIATRICS

Rustin McIntosh, M.D., *Director*

During 1953 the Pediatric Service gave 50,016 days of care to 4,576 in-patients, and in the pediatric division of Vanderbilt Clinic the number of visits totaled 42,216. As compared with the previous year, there were 8 per cent more patients admitted to the Hospital, and their average stay was reduced from 11.8 days to 10.7 days.

In the death of Dr. Beridge R. Robertson, on September 7, 1953, the service suffered a grievous loss. A former member of the house staff and a pediatrician of proved skill, she had in recent years been devoting more and more time to the hospital service and to the pediatric division of Vanderbilt Clinic in proportion as the growth and maturity of her own children left her freedom of action. In the last several months of her life she faced with equanimity and with exemplary courage the knowledge that she had a fatal illness. She will always remain a source of inspiration to her friends.

Dr. Beryl H. Paige resigned her position as pathologist to Babies Hospital on July 1. Her service to the hospital goes back over many years, inasmuch as she commenced working in pediatric pathology in 1930 and succeeded to the post of chief pathologist on the resignation of Dr. Wollstein in 1935. Her contributions to the understanding of disease processes in infancy and childhood are numerous and widely appreciated. It is a distinct loss to the Service that considerations of health obliged her to offer her resignation.

Dr. Richard L. Day resigned December 1 in order to accept the position of executive officer of the Pediatric Department in the New York State University College of Medicine in Brooklyn. His friends at Columbia-Presbyterian Medican Center take pride in this well-deserved recognition of Dr. Day's abilities and wish him all success in his new setting.

The resignations of Dr. Lloyd S. Saltus and Dr. Frank S. White, both Assistant Pediatricians in Vanderbilt Clinic, were accepted with regret. New appointments include those of Dr. Harvey H. Corman, Dr. Mabel Ross, Dr. Mary H. Samuels, Dr. William L. Sands, and Dr. Robert C. Wheeler, all as Assistant Pediatricians. The L. Emmett Holt Fellowship was held during the first half of the year by Dr. Henry G. Dunn, and during the second half by Dr. Audrey K. Brown.

Among many changes in policy and in the application of policy which

are constantly required in an organization which must be ready at all times to adapt itself to changing circumstances, one item may be singled out for mention, namely, the altered policy with regard to visiting hours for parents. Over the years parent visits have become progressively encouraged, rather than discouraged; and during the past year arrangements have been put into effect whereby parents may visit their children at some time during every day. Only a few years ago visiting was allowed not oftener than once a week, save in the case of desperately ill patients. The current program is to be viewed as an experiment which should be studied objectively. One must face the fact that it is seldom possible to make the hospital sojourn of a young patient positively enjoyable; and it is still somewhat open to question what device will make his stay the more readily tolerable—whether by focusing every effort on hastening his adaptation to his new situation on the one hand, or by increasing the frequency of visits of his parents, with the risk of his being constantly and unhappily reminded of his exile. The added burden which increased visiting hours unquestionably imposes on house staff, nurses and hospital administration will be gladly borne if the patient's welfare is thereby advanced.

Research activities directly related to the clinical care of patients have elicited a most welcome response from friends of the Hospital, and it is a pleasure to record the setting up of a number of funds devoted to the study of specific diseases. Among these may be mentioned the Robert Bacon Whitney Cystic Fibrosis Fund, the Gabriel Holst Fund for Research in Cancer and Allied Diseases, the Celiac Research Fund and certain gifts specifically designated for research in hematology. In addition, a number of the parents of children with dysautonomia, recognizing Dr. Conrad M. Riley's interest and outstanding competence in this field, have supported his studies including the institution of certain group therapeutic measures. The donations just listed are, of course, additional to those made by and through Columbia University, which constitute the main support of the pediatric research program. Publications by members of the Pediatric Service during the past year comprise one textbook, one pamphlet for parents, and twenty-two contributions to periodical literature.

Investigations in microbiology include a study of genetic control of poliomyelitis viruses, supported by a grant from The National Foundation for Infantile Paralysis and participated in by Drs. Hattie E. Alexander, Katherine Sprunt and Isabel M. Mountain; continuation of Dr. Alexander's, Dr. Stephen Zamenhof's and Miss Grace Leidy's studies of the control of inherited traits of bacterial cells; and further investiga-

tions of the biology of H. pertussis. The latter two projects are supported by grants from the National Institutes of Health, as is also our participation in a cooperative study of the treatment of meningeal and miliary tuberculosis, supervised by Dr. Douglas S. Damrosch.

With the aid of generous grants from the United Fruit Co., the Robert Bacon Whitney Fund and the Frankel Fund, Dr. Dorothy H. Andersen and a number of associates are continuing their study of the celiac syndrome. Dr. Paul A. di Sant'Agnese's discovery of the abnormal composition of the sweat of patients with cystic fibrosis of the pancreas has considerably enlarged our concept of that disease. Dr. Virginia N. Wilking has undertaken a preliminary study of the effect of pancreatic fibrosis on the personality of the child and on the emotional life of his family. The pediatric pathology laboratory, in addition to carrying responsibility for approximately one-third of the post-mortem examinations made in the entire Medical Center, has contributed to the organization of a new pediatric tumor clinic and also to investigations of the causes of death of premature infants.

Working under a grant from the U. S. Public Health Service, Dr. Richard L. Day has been able to report encouraging progress in his studies of the pathogenesis of kernicterus. He has also continued his inquiry into the physics and physiology of the expansion of the lungs of newborn subjects. Dr. Ruth C. Harris' evaluation of a number of liver function tests has continued under a grant from Mead Johnson and Company.

Thanks to generous support from the Association for the Aid of Crippled Children, our long-term studies of the effects of illness in pregnancy on the development of the fetus have been resumed and extended under the direction of Dr. Mary R. Richards and with the help of Dr. Mary H. Samuels. A new angle which is being investigated with Dr. John Caffey's help, and one which is of particular interest to orthopedic surgeons, has to do with the normal development of the hip joint in early life as revealed in roentgenographic studies. Financial help which had formerly been provided by the Federal Government and distributed through the Department of Health of New York State in support of this project was unfortunately cut off in the autumn by reason of stringent economies applied by the Congress in Washington. Dr. Caffey continues to serve as consultant to the Newburgh-Kingston fluoride study, which is directed primarly toward the prophylaxis of dental caries but which incidentally has furnished us invaluable material for the study of normal variants in the growing skeleton.

The psychological and physiological study of children who have suffered frequent accidents, under Dr. William S. Langford's direction, was brought to a close without revealing the objective attributes of that visionary character, the "accident-prone" child. The Metropolitan Life Insurance Company generously supported these investigations.

Dr. James A. Wolff, with the collaboration of Drs. Audrey K. Brown and Frederick H. von Hofe, has been investigating the circumstances of origin of a number of diseases of the blood and blood-forming organs. New techniques are being applied to the recognition of different forms of hemoglobin and of various components of the plasma protein, with interesting and encouraging results.

Dr. Alexander was guest lecturer at the International Symposium on Viruses at Cold Spring Harbor, at the Children's Hospital in Denver, at the Gordon Research Conference on Cancer in New London, N. H., and at the Seventh International Pediatric Congress in Havana, Cuba. She is secretary of the Pediatric section of The New York Academy of Medicine, and has also been elected to a seven year term on the Council of the American Pediatric Society. Dr. Caffey spoke before the New England Radiological Society in April and before the Rocky Mountain Radiological Society in August. Dr. Langford was reelected treasurer of the American Orthopsychiatric Association. Dr. McIntosh was elected president of the American Pediatric Society for 1953-54, and of the Association for Research in Nervous and Mental Disease for 1954.

Lectures were given before the pediatric staff by Professor Alan Moncrieff, of London University, by Dr. W. W. Payne, of the Great Ormond Street Hospital, London, by Dr. Jean Sénécal, Professor of Pediatrics in the Institute of Higher Studies at Dakar, French West Africa, by Mr. James Robertson, of the Tavistock Clinic, London, and by Professor Bo Vahlquist, of the University of Uppsala. Owing in part to the fact that an international pediatric congress was held in the Western Hemisphere in October, the number of visitors from foreign lands was unusually large, representing more than fifteen different countries.

In the light of the international role which the Columbia-Presbyterian Medical Center necessarily plays, directors of clinical services can look only with deep concern on legislation recently passed by the State of New York which renders it difficult, if not impossible, to appoint to the resident staff a citizen of a foreign country. It is to be earnestly hoped that these rigid restrictions will soon be relaxed by appropriate modification of the existing regulations.

Thanks are due to the officers and trustees of the hospital for their

understanding of the aims, as well as of the problems, of the Pediatric Service. It is a pleasure to record the hearty cooperation of all services, both professional and non-professional, whose members have had a hand in the care of our patients.

PHYSICAL MEDICINE AND REHABILITATION

ROBERT C. DARLING, M.D., *Director*

Whereas 1952 was a year marked by organizational change occasioned by the establishment of this Service, 1953 was characterized by consolidation of these changes and an opportunity to observe the likely trends of the future.

It is the aim of the Service to provide and supervise physical and occupational therapy whenever indicated and recommended by the referring services. The continuing large number of treatments administered in the several therapy centers of the Hospital is evidence that this ideal is being approached. Where less than the ideal is being achieved, this can be attributed chiefly to the fact that there is a shortage of physical and occupational therapists and therefore there is great difficulty in filling staff vacancies. Even inexperienced therapists can obtain employment in government services or in specialized endowed institutions at salaries with which the general hospital cannot at present compete.

The program of graduate training of physicians in this specialty is continuing with a full quota of trainees. These young physicians are being trained not only in the intelligent prescription and supervision of the use of the tools of Physical Medicine, but also in the ability to evaluate the total situation of the patient with chronic disabling disease. This latter concept of the function of the specialist in Physical Medicine and Rehabilitation is gaining recognition in the Hospital and in the community.

The affiliation with the Institute for the Crippled and Disabled is continuing to be a prominent phase of this Service. In the important aspect of the smooth transition of care of individual patients from one institution to the other, significant advances have been made; similarly, there have been increasing interchanges between professional personnel. An exhibit presenting the total rehabilitation program of the Hospital, this Institute and the College of Physicians and Surgeons, was shown at the Medical Center's Twenty-fifth Anniversary.

Research studies of the electrolyte chemistry of the sweat in fibrocystic disease of the pancreas have been continued by Dr. Darling and

Miss Ethel Shea in collaboration with Dr. Paul A. di Sant'Agnese of the Pediatrics Service and Dr. George A. Perera of the Medical Service. These studies amply establish the uniform failure of these patients to be able to secrete a dilute sweat, and in addition strongly suggest the occurrence of a familial incidence of the abnormality with or without pancreatic involvement. These studies utilize the special constant temperature room in the College of Physicians and Surgeons, built with the aid of the Bernard M. Baruch Gift to Columbia University; likewise, the study itself is supported in part from this gift. Results of this work were summarized at one of the symposia of the Medical Center's Twenty-fifth Anniversary.

Utilizing the same constant temperature room, Dr. Darling and Dr. Milos Lota, with the collaboration of Dr. Elliott Oserman of the Medical Service and Delafield Hospital, are embarking on a quantitative study of peripheral circulation. Parallel measurements will be made with a plethysmograph developed by Dr. Lota, which measures total limb circulation, and a heat flow meter developed by Dr. Osserman, which measures superficial circulation. In part, the measurements will serve to help in the management of patients in the Hospital's peripheral vascular clinic.

Under a contract between the Veterans Administration and the College of Physicians and Surgeons, studies have been begun by Dr. Darling and Miss Shea on the possible occurrence of creatinuria in amputees. Preliminary evidence is inconclusive as to whether the muscular disturbance in amputee stumps is sufficient to cause detectable chemical disturbance of this sort.

Dr. William B. Snow began a six months' sabbatical leave on October 1, 1953. His absence necessitated the temporary assignment of his many responsibilities among the other staff members. Dr. Snow is currently President of the American Congress of Physical Medicine and Rehabilitation, in addition to his many advisory positions in Physical Medicine in the community. Dr. Darling was appointed Chairman of the Committee on Advances in Education of the American Congress of Physical Medicine and Rehabilitation. He lectured on two occasions at the recent Institute on Physical Medicine for Physical and Occupational Therapists, sponsored by the United Hospital Fund, the Greater New York Hospital Association, the New York Occupational Therapy Association and the American Physical Therapy Association, New York Chapter. Dr. Edward E. Gordon lectured on occupational therapy before the same Institute. In February 1953, Dr. Gordon attended a course on upper extremity prostheses spon-

sored by the Advisory Committee on Artificial Limbs of the National Research Council at the University of California at Los Angeles. Since then he has been active in this field at the Institute for the Crippled and Disabled, and is a consultant to the Prosthetic Research Laboratory in New York and a member of the Committee on Braces and Prostheses, American Congress of Physical Medicine and Rehabilitation. Dr. Arno David Gurewitsch visited and lectured at the Yugoslav Institute for Rehabilitation in Belgrade; he is Chairman of the Section on Physical Medicine and Rehabilitation of the New York State Medical Society and a member of the United Hospital Fund's Conference Group on Convalescent Care. Dr. Morton Hoberman has become a member of the New York Academy of Sciences and Vice-President of the New York Society for Physical Medicine and Rehabilitation.

The following papers have been published by staff members in 1953:

Electrolyte Abnormalities of the Sweat in Fibrocystic Disease of the Pancreas. Darling, di Sant'Agnese, Perera and Andersen, *Amer. J. Med. Sci.*, 225:67, Jan. 1953. Factors Prognostic for Vocational Rehabilitation among the Physically Handicapped. Darling and Lesser, *Arch. of Phys. Med. & Rehab.*, 34:73, Feb. 1953. Assistive Activities for the Custodial Type Patient. Hoberman and Cicenia, *Arch. of Phys. Med. & Rehab.*, 34:7, July 1953. Methods and Goals in Childhood Rehabilitation. Snow, *Cerebral Palsy Rev.*, 14:11, Nov. 1953. Abnormal Electrolyte Composition of Sweat in Cystic Fibrosis of the Pancreas; Its Clinical Significance and Relationship to the Disease. di Sant'Agnese, Darling, Perera and Shea. *Pediatrics*, 12:549, Nov. 1953. Sweat Electrolyte Disturbances Associated with Childhood Pancreatic Disease. di Sant'Agnese, Darling, Perera and Shea, *Am. J. Med.*, 15:777, Dec. 1953.

During the year, 48,619 patient visits were made to the Physical and Occupational Therapy services and a total of 201,123 treatments were given. Distribution of these treatments was as follows: 25 per cent to private and semi-private patients, 23 per cent to ward patients, and 52 per cent to clinic patients.

Physical Medicine and Rehabilitation, as the youngest recognized field of specialized medicine, is naturally not yet perfectly defined in all its details and functions. In this Hospital, with its affiliated institutions, we have fortunately a uniquely wide area of clinical facilities in which we can help to add definition and stability to the field.

PSYCHIATRY

IRVILLE H. MACKINNON, M.D., *Acting Director*

On January 1, 1953 a Psychiatric Service was established in the Presbyterian Hospital.

This arrangement will serve to consolidate and integrate the psychiatric facilities and will not alter or disturb any previously existing assignments on the various other Services of the Hospital. The psychiatric domain has been particularly happy to see the expansion of the psychiatric facilities and it is the goal of the Service in this closer relationship to cooperate more efficiently with all the other Services of the Hospital.

Dr. Nolan D. C. Lewis, Director of the New York State Psychiatric Institute, and Executive Officer of the Department of Psychiatry and Director and Attending Psychiatrist, Vanderbilt Clinic, resigned, effective September 1, 1953. His departure has been received with deep regret by all of his associates with whom he has endeared himself through his personal attributes and his professional wisdom.

The announcement of the death of Dr. Felix Hoffman has been received with deep regret by all of his colleagues and associates.

Dr. George E. Daniels has once again resumed his duties at the Psychoanalytic Clinic. In his absence the Service was ably handled by Drs. Kenneth Kelley and John A. P. Millet who are to be congratulated on their conscientious and loyal support of the department. We are particularly indebted to Dr. Robert F. Loeb who has been most cooperative, sympathetic and understanding of the problems surrounding the organization, development and extension of this form of related psychiatric service.

Dr. Leon Moses has continued his research study on the psychiatric aspects of essential hypertension, and one aspect of the findings has been published. Dr. Ruth Easser, with the cooperation of Miss Margaret Hogan, R.N., has been making a study of natural child birth, which is nearly ready for a final report.

Drs. Daniels and Alvin Goldfarb are investigating the eosinophil counts on patients under psychotherapy in an attempt to determine if it could serve as an index in anticipating the final results. Drs. Millet, Joseph Lubart and A. N. Miranda, with the cooperation of Dr. Isidor Mufson of the Medical Service, have been investigating the psychiatric implications of Raynaud's Disease. Drs. Daniels and Aaron Karush, in cooperation with Dr. Robert B. Hiatt of the Surgical Service, have been continuing their studies on ulcerative colitis.

RADIOLOGY

Ross Golden, M.D., *Director*

During 1953 two residents and two clinical fellows entered the military service. Dr. Alexander D. Crosett, Jr., in his second year and Dr. Ronald E. Herson in his first year were called. After completing their tour of duty, they will return to finish their training in radiology. Dr. Richard M. Friedenberg and Dr. Ramberto A. Perez were fortunately able to finish their required period of training before leaving.

Major Wilson R. Scott, Medical Corps, U. S. Army, Commandant of the R.O.T.C. in the College of Physicians and Surgeons, was transferred to the Fitzsimmons General Hospital, Denver, Colorado. He was the third regular Army medical officer to receive training on the Presbytherian Hospital Radiological Service.

Dr. Eugenia Karvouni, of Athens, Greece, and Dr. Walter Longshore, of Orange, N.J., clinical fellows, fulfilled the requirements of the American Board of Radiology last spring. Dr. Roland Ormsbee, resident in radiology at the U. S. Marine Hospital, Staten Island, returned to that Institution after nine months on the Radiological Service. Dr. Jose Pedras of Rio de Janeiro, Brazil, finished a year of training in radiotherapy as a clinical fellow, and is now working at the Holt Radium Institute, Birmingham, England. After observing radiotherapy technics in France and Sweden, Dr. Pedras will return to the Hospital da Misericordia in Rio de Janeiro. Dr. Dana Sheldon resigned his appointment as resident in radiology on November 1, to take up training in pediatrics. The remainder of this residency period has been assigned to Dr. James M. Monaghan, now in the Army Medical Service, who will come on duty May 1, 1954.

Dr. Solomon S. Schwartz' resignation as Assistant Radiologist and Assistant Professor of Radiology, effective December 31, was received with great regret. He has accepted the directorship of the Radiological Service of the Brooklyn Jewish Hospital. Dr. Schwartz has won the confidence and affection of the clinical staff and the admiration of his colleagues on the Radiological Service for his ability, his loyalty and honest hard work. Dr. Edward E. Julien resigned on May 1 as Assistant Radiologist, to become the radiologist of the Rome-Murphy Hospital, Rome, New York. Dr. Anthony R. Galgano resigned as Assistant Radiologist on November 19 to move West. Our best wishes go with them.

Dr. R. G. Bjorn Bjornson of Minneapolis, Minn. was appointed

Assistant Radiologist and Instructor in Radiology, effective August 15.

During 1953 Dr. Golden gave five addresses in various parts of the country. With Dr. Pablo L. Morales, he presented a paper on X-ray Examination in Organic Disease of the Small Intestine before the American Medical Association in June. In September he read a paper on Amyloidosis of the Small Intestine before the American Roentgen Ray Society in Cincinnati and in February attended the Teachers Conference of the American College of Radiology in Chicago. He attended the Seventh International Congress of Radiology held in Copenhagen, Denmark, July 19-26, as the Delegate of the American College of Radiology and as Chairman of the Delegation from the United States. Following this meeting, he visited hospitals in Norway, Sweden, Germany, Switzerland, France and England. It was his impression that much better apparatus for body section radiography (variously called laminography, planigraphy, et cetera) is available in Europe than in the United States, and that much more use is made of this valuable technique there than here. Also better apparatus for angiography, the demonstration of the arteries and veins in various parts of the body, is made on the other side of the Atlantic, particularly in Sweden, than is available in this country. On the other hand, the apparatus and techniques for the examination of the digestive tract in the United States are superior. Dr. Golden participated in the examinations given at two sessions of the American Board of Radiology and attended the meeting of the Radiological Society of North America in Chicago in December. A paper entitled Early Detection of Cancer of the Stomach was published in *Cancer*. Dr. Golden participated in a panel discussion of the problem of cancer and ulcer of the stomach, televised on a closed circuit on December 2 under the auspices of the American Cancer Society. This was one of a series of discussions dealing with cancer telecast in color by the Columbia Broadcasting System under the auspices of the American Cancer Society. They are visible at the Delafield Hospital, The New York Academy of Medicine in New York, and also in Boston, Philadelphia and Chicago.

Dr. Russell Wigh published two papers on the photofluorographic method of survey examination of the stomach for the detection of symptomless cancers. This work was done by Dr. Wigh while he was Assistant Professor of Radiology at Jefferson Medical College in Philadelphia.

Dr. Gerhart S. Schwarz has designed a slide rule which simplifies the correction of X-ray measurements of the pelvis and of the baby's head in obstetrical patients. This slide rule is being manufactured by

the Picker X-ray Corporation. In collaboration with Dr. A. Reha Islam, clinical fellow, he presented a paper at the Radiological Society meeting in Chicago in December on the measurement of the dose in the tissues of the body when X-ray treatment is given by two parallel beams. Dr. Schwarz and Dr. Juan M. Taveras have designed a lumbar puncture needle which will make easier the withdrawal of contrast material from the spinal canal in myelographic studies for herniated discs and spinal cord tumors.

Dr. Alfred S. Berne, in collaboration with Dr. Taveras and Dr. Ernest H. Wood, presented a paper on the X-ray treatment of spinal cord tumors at the meeting of the Neurosurgical Society of America and again at the Radiological Society of North America. He prepared an exhibit on angiocardiography, a method of examining the heart for congenital defects, for the Twenty-fifth Anniversary Celebration.

Dr. Harold W. Jacox read a paper at the Seventh International Congress of Radiology in Copenhagen, Denmark, in July. He was asked to be a founding member of the new International Club of Radiotherapists which will meet at the International Congress of Radiology every three years and once a year elsewhere between these congresses. Following the International Congress he visited radiotherapy departments in five countries on the other side of the Atlantic. Dr. Jacox is Chairman of the Section of Radiology of the New York State Medical Association and is Vice-President of the New York Roentgen Society. He gave six other addresses, continues as abstractor for Excerpta Medica, as co-editor of the Year Book of Radiology, and as Editorial Consultant to *Radiology*. He attended the Eastern Conference of Radiologists in Philadelphia, the New York State Medical Society meeting in Buffalo, the American Medical Association meeting in New York, and the Radiological Society of North America in Chicago.

Dr. Morton Kligerman read a paper on Radioactive Gold in the Treatment of Cancer of the Pleura and Peritoneum at the meeting of the American Radium Society in St. Louis in April. He gave four addresses elsewhere, and with Miss Jeanne Richmond, published a paper on Volume Dosage Distribution in the Female Pelvis in Radium Therapy, in the American Journal of Roentgenology. With co-workers he has prepared another paper on Rotation Therapy Technics, has published two book reviews; he is leading four research projects connected with the radiation therapy of cancer. He attended the meeting of the American Medical Association in New York and the American Roentgen Ray Society in Cincinnati. He was appointed Associate Editor of the Year Book of

Radiology and was promoted to the Associate Professorship of Radiology, Columbia University.

Dr. Catherine J. Dalton and Dr. Solomon Schwartz have prepared a paper on Abnormalities of the Paraspinal Shadow in the Thorax.

Dr. Josephine Wells, in collaboration with Dr. Charles A. Flood, has published a paper on Hiatus Hernia in Gastroenterology and has submitted for publication a paper on Osteitis Consensans Ilii.

Dr. John Caffey, in addition to preparation of the third edition of his popular book Pediatric X-ray Diagnosis, published two papers dealing with diseases of children. He was granted a diploma in Diagnostic Roentgenology by the American Board of Radiology. He gave nine addresses in different parts of the country.

Dr. Taveras continues his important work as Chief of the Neurological Division of the Radiological Service with its manifold teaching activities. With various collaborators in the Neurological Institute he has published three papers, has submitted three others for publication, and has presented papers at the meetings of the American Neurological Association and of the Neurosurgical Society of America. He was made a member of the Commission on Hospital Standards of the American College of Radiology. He was promoted to Assistant Professor of Radiology in Columbia University.

During 1953 members of the staff of the Radiological Service gave a total of thirty-five lectures and either published or prepared for publication eighteen papers. This was accomplished in spite of the inadequacy of numbers and of the relatively rapid turnover of staff members.

During the past year the relation of the Radiological Research Laboratory to the activities of the Hospital has remained the same as described in previous reports. All of the radioactive isotopes used at the Columbia-Presbyterian Medical Center, both for research and for the treatment of patients, are processed and measured by the Laboratory personnel under the supervision of Dr. G. Failla, Director of the Laboratory, and of Dr. Edith H. Quimby. Dr. Harald H. Rossi is working on new methods of measuring the radioactivity of isotopes and the absorbed tissue dose of all forms of ionizing radiation. Dr. Roberts Rugh is concerned with certain biological effects of radiation of particular interest to the Atomic Energy Commission. A grant from the American Cancer Society for the study of radiation dosage problems, has been renewed for 1954. A paper based on part of this work was presented by Dr. Quimby at the International Congress of Radiology in Copenhagen, and at the Radiological Society meeting in Chicago.

Dr. Failla is actively involved in work with the Atomic Energy Commission and other government agencies, both civilian and military, on problems related to atomic energy. He is a member of the International Commissions on Radiological Units and on Radiological Protection, which function under the direction of the International Congress of Radiology. The work of these Commissions is of vital importance to medical radiology in all countries. Dr. Failla was an Honorary Vice-President of the 7th International Congress of Radiology and gave a paper at its meeting in Copenhagen. He is President of the Radiation Research Society.

Dr. Quimby is President of the American Radium Society, the first physicist to be so honored. She gave the William Welch Memorial Lecture at Mt. Sinai Hospital, New York, and the George Holmes Lecture of the New England Roentgen Ray Society in Boston. Dr. Rossi and Mr. Gross, of the Radiological Research Staff, participated in the Nevada atom bomb tests last spring. Several addresses were given before various medical and physical societies and several papers were published by members of this staff.

The Radiological Service of the Presbyterian Hospital is grateful for the help which is given so freely by the members of the staff of the Radiological Research Laboratory.

During the past year the new room for angiocardiography has been put into use but requires additional equipment. The best apparatus for this purpose is a rapid film changer which will make as many as twelve exposures per second simultaneously in both horizontal and vertical directions. At the present time this is available only in Sweden.

The teaching equipment in the conference room has been greatly improved by the addition of an excellent X-ray film projector made by Leitz in Germany. With this projector every person in the room gets an excellent view of the films. Also a Stanford stereoscope has been added and two new improved X-ray viewing cabinets have been ordered.

In the last annual report mention was made of a grant from the U. S. Public Health Service for the purchase of a 24 million volt Betatron for use in the treatment of cancer. This equipment has been manufactured by the Allis Chalmers Corporation in Milwaukee, delivery postponed pending remodelling of the building south of the main basement corridor between the Babies Hospital and the east wing of the Presbyterian Hospital.

Last year's report commented on the increasing volume of cerebral angiography cases, in which a series of X-ray pictures of the arteries and veins in the brain are taken in rapid succession. This work, in the opinion of Dr. Taveras, has reached the point where the need for additional facilities is acute. This procedure has become the most important method

of detecting and localizing tumors and certain other diseases of the brain.

A statistical summary of the work of the X-ray Service for 1952 follows: In the Harkness Pavilion diagnostic division for private patients, 23,107 patient visits were registered, an increase of 3,107 over 1951. On the third floor division for clinic and ward patients, 55,981 patient visits were recorded, an increase of 4,621 over 1951. At the Neurological Institute 8,104 patients were registered for diagnostic procedures, which was 176 less than 1951, but the proportion of the time-consuming examinations, such as cerebral arteriograms and myelograms, increased. At the Babies Hospital, 9,713 patients received diagnostic X-ray service, an increase of 904 over 1951. At the Eye Institute 171 patients were examined by X-ray, an increase of 51 patients over 1951. In the Squier Urological Clinic, 4,449 patients were examined, an increase of 330 over 1951. During 1952, a grand total of 101,525 patient visits were recorded in the various divisions of the Presbyterian Hospital.

In Radiotherapy, 7,022 X-ray treatments were given to 733 private patients; 5,824 X-ray treatments to 662 clinic and ward patients; 5,052 X-ray treatments to 303 Neurological Institute patients; and 771 X-ray treatments at the Eye Institute were given to 103 patients. A total of 18,669 X-ray treatments were given to 1,801 patients. These figures indicate a slight reduction in the number of X-ray treatments and a slight increase in the number of patients receiving them. In 1952, 187 radium treatments were given, 36 less than in 1951, to 165 patients, and 38 patients received 45 treatments with radioactive isotopes.

The following are the figures for 1953 on the various diagnostic divisions: Harkness Pavilion, 25,132 patient visits, 2,101 more than 1952; third floor division for clinic and ward patients, 56,468 patient visits, 487 more than 1952; Neurological Institute, 7,519 patient visits, 585 less than in 1952, but with an increase again in the more time-consuming types of procedure; Babies Hospital, 8,972 patient visits, 741 less than in 1952; Eye Institute, 746 patient visits, 28 less than in 1952; Squier Urological Clinic, 4,782 patient visits, 333 more than in 1952. During 1953 a grand total of 103,619 patient visits to the various diagnostic divisions were recorded, 2,094 more than in 1952.

In Radiotherapy, 661 private patients received 6,722 X-ray treatments; 475 clinic and ward patients received 6,227 treatments; 298 Neurological Institute patients received 5,884 X-ray treatments; 79 Eye Institute patients received 585 X-ray treatments. One hundred fifty-seven patients received 176 radium treatments, and 36 patients received 56 treatments with radioactive isotopes.

This is the thirty-second and the final annual report to the Board of Trustees to be prepared by the present Director of the Radiological Service. On May 8, 1922 the X-ray service of the old Presbyterian Hospital consisted of a radiographic, a cystoscopic, a fluoroscopic, a dark room, and an office on the second floor. An X-ray treatment room was located in the basement. An average of about forty patients a day received X-ray service. The staff consisted of one radiologist, an X-ray technician, a radiotherapy technician, a dark room technician, and one secretary. Today this Service is one of the largest, if not the largest, in the United States. On an average day approximately five hundred patients receive X-ray service of one sort or another. The staff consists of seventeen full-time radiologists, forty technicians, five radiotherapy technicians, eight dark room technicians, and sixty-one secretaries, clerks and aides.

The training program for residents in radiology has achieved a world-wide reputation. The allotted number of twelve residents could easily be doubled and should be increased to at least eighteen, in view of the shortage of radiologists and the large number of excellent applicants for training.

Throughout these thirty-two years the annual reports have reflected the ever increasing use in medicine of X-ray methods of examination and of treatment, and the constant pressure for more and more X-ray service requiring more and more technical facilities, space and staff. No sooner is the pressure relieved in one area than it becomes critical in another. As this is written, there is no evidence that the era of expansion of the use of X-ray facilities is drawing to a close. Rather, it can be expected to continue.

From time to time the need for a larger staff of radiologists and the difficulty of attracting and keeping good men has been pointed out. The present staff is inadequate and should be increased. The problem of staffing the service is tied up not only with salary, but also with what might be called working conditions and time for investigation. This problem deserves serious consideration and long range planning by those in authority.

As of July 1, 1954, the present Director of the Radiological Service will be retired. He will move to Los Angeles where he has been appointed Visiting Professor of Radiology at the new Medical School of the University of California at Los Angeles. He would like to express to his colleagues of the Radiological staff both past and present his deep appreciation of their loyalty. To his friends of many years on the profes-

sional staff of the Columbia-Presbyterian Medical Center he would like to repeat the dedication of his book on *The X-ray Examination of the Small Intestine*, published in 1945, which will serve as a Valedictory for the thirty-two years of association which is drawing to a close: "To the Spirit of Cooperation which rules the staff of the College of Physicians and Surgeons and of the Presbyterian Hospital this book is gratefully dedicated."

SURGERY

GEORGE H. HUMPHREYS, II, M.D., *Director*

The Surgical Service in 1953 continued its activities along the lines established during the preceding years of transition which followed World War II. The year was noteworthy principally in two related aspects: first, the relative absence of change, both in staff and in physical facilities, and second, the increase in work done as a direct consequence of this increased stability.

The attending staff lost two men, one through retirement and one through resignation. Two assistant attendings were granted leaves for military service. Two new assistant attendings were appointed. Thus we suffered a net loss, though a temporary one, of two men. In spite of this, and as a direct consequence of an increase in nursing assistance which for the first time since the war has been almost adequate numerically for the new operating room facilities, there was a greater increase in total operating than in any year since the Medical Center was opened. Five thousand, seven hundred and fifty operations were performed on the general surgical service, an increase of 1,240 over 1952. As last year these were almost equally divided between ward and private. The increase was fairly evenly distributed among the major categories of operation, showing no tendency for any one group to over-balance any other. Preservation of this balance is of course of utmost importance to the teaching and training program. Interestingly, the number of transfusions has slowly declined during the past three years in spite of the increasing number of operations many of which continue to be of great magnitude, — an indication of an increased awareness of the risks involved and of better technical surgery. Comparative figures of the last three years are shown in Table I.

The surgical clinics consisting of the minor surgical dressing clinics, the emergency operating rooms, the follow-up, cardio-vascular, chest, nerve block, neoplasm, oral surgery, plastic surgery, proctology and thyroid follow-up clinics continued at a high level of activity. A greater number of minor elective surgical procedures are being done in the emergency operating rooms on the third floor. These rooms have been used to better advantage by assigning a day weekly to each of the three surgical services to perform selected operations on their ward patients. This has helped reduce the load on the regular 18th floor operating rooms and has considerably shortened the waiting period for patients requiring

these services. The amount of service rendered the out-patients in the 3rd floor operating rooms continued. The accumulation of patients being followed through the years in the surgical follow-up clinics and the general increase in the life span has created a serious problem in these clinics. It has become increasingly difficult to accommodate the cumulative number of follow-up visits. We have, therefore, found it necessary to reduce the follow-up period and the number of visits for the more common and benign conditions in order to continue our present standards in carefully following patients with malignancy and diseases of special interest.

TABLE I

	1951	*1952*	*1953*	*Increase*
Total Operations	4,105	4,510	5,750	1,240
Per cent Ward Operations	53%	49%	48%	
Adult Case Classification*				
Thyroid	364	372	409	37
Head and Neck	184	231	350	119
Breast	328	374	434	60
Thorax	164	177	241	64
Gastro-Intestinal	530	469	632	163
Appendix	203	139	216	77
Gall Bladder, Pancreas	341	277	424	147
Hernia	320	291	434	143
Other Celiotomy	309	335	413	78
Rectal and Perineal	307	309	429	120
Other Superficial	675	853	893	40
Transfusions	13,537	13,474	12,729	—745

*Babies Hospital classification not available.

On July 1, Dr. William Barclay Parsons retired after thirty-nine years of service to the Hospital. This began with his appointment as intern in 1914. From 1917 to 1919 he served in France as Captain in the Presbyterian Hospital unit, after which he returned as an assistant visiting surgeon. In 1922, following the reorganization of the staff, he was advanced to associate attending, becoming one of the small group which established the pattern of the service after the move to the Medical Center. When the Presbyterian Unit was organized again just prior to World War II it was logical that Dr. Parsons should be put in command, with the rank of Lieutenant Colonel. However, after the unit was called he was detached and assigned to Australia as Chief Surgical Consultant. Discharged in 1945 with the rank of Colonel, he

received the Legion of Merit Medal in 1946 after he had returned to the staff of Presbyterian Hospital. During the ensuing years of reorganization which followed the retirement of the older members of the Service Dr. Parsons' long perspective on the needs and problems of the service was of invaluable assistance.

A superb technical surgeon, Dr. Parsons became interested in thyroid surgery early in his career and was the first of the able group of surgeons whose work in thyroid disease has been an outstanding contribution of the hospital. Later he became interested, with Dr. Allen O. Whipple, in developing the first operations to be successful in removing tumors of the pancreas. Always an excellent teacher, he set an example for the generation which follows him in the fine balance between gentle, precise and well-planned operative technique and the broad common sense and understanding of the patient as a whole which marks the well-rounded surgeon. Although retired, he still will be called upon for help (if less heavily burdened with duties) for he continues on the staff as Consultant.

On September 1, Dr. Joseph J. McDonald resigned as Professor of Surgery and Attending Surgeon to accept a position as Dean of the Medical School of the American University in Beirut, Lebanon. He had been appointed in January 1951 and in the short two and one half years he was with us had taken charge of the Surgical Service of the Delafield Hospital, and also had acted as coordinating chief of the group of men from the services of Surgery, Otolaryngology, Oral Surgery and Radiology who worked together in caring for patients with tumors of the head and neck. In this difficult and changing field his work was unsurpassed and his loss is keenly felt. But in accepting a post of greater academic responsibility he represents another "graduate" of whom we are proud.

On January 1, Dr. Charles W. Findlay, Jr. was called to duty in the Army, and on June 15, Dr. George F. Crikelair was recalled to the Navy. On July 1, Dr. Howard T. Barker joined the staff as Assistant Attending Surgeon. Dr. Barker had completed his residency at the University of Pennsylvania Hospital the previous year and has been engaged in fundamental studies of the metabolic reactions to injury and operation. He comes to us well equipped to continue the work begun by the late Dr. John Lockwood and Dr. H. T. Randall in the metabolic research ward. On January 1, Dr. Joseph Tamerin was appointed Assistant Attending Surgeon. Dr. Tamerin is Chief of the Plastic Surgery Service at Harlem Hospital and has been assisting Dr. Jerome P. Webster in his library and in didactic exercises for the plastic surgical residents for several

years on an informal basis. His appointment recognizes these continued services and provides additional clinical teaching the need for which was increased by Dr. Crikelair's return to the Navy.

The unfortunate effects of the Brydges law in interfering with clinical training of doctors from other countries was felt with increasing effect this year. Nevertheless we were able to provide a postgraduate course in the principles of cardio-vascular surgery for Dr. Abimael da Cruz of Brazil, Dr. Jorge Freidenberg of Argentina and Dr. J. N. Coelho of Portugal during the spring. On July 1, Dr. Franklin Ashley was appointed as Clinical Fellow in conjunction with the American Cancer Society Fellowship awarded him to work in Delafield Hospital. In October, Dr. John Paul of Edinburgh was appointed Research Fellow.

On October 12 and 13, the Twenty-fifth Anniversary of the Medical Center was celebrated. Eight exhibits were prepared by members of the Surgical Service, and an afternoon symposium presided over by Dr. Allen O. Whipple was conducted. A panel discussion with prominent science writers included a panel on Surgery in which Dr. Humphreys was ably assisted by Dr. Cushman D. Haagensen, Dr. Joseph Ransohoff of the Neurological Surgery Service and Dr. Emanuel N. Papper of the Anesthesiology Service. Among the twenty-five retired men to receive the Distinguished Service Medal in honor of their contributions over many years were four Surgical Consultants: Dr. Allen O. Whipple, Dr. Fordyce B. St. John, Dr. John M. Hanford and Dr. William Barclay Parsons.

Beginning in October and continuing into the winter four members of the Surgical Service cooperated with members of other services at the Delafield Hospital in presenting, under the auspices of the American Cancer Society and the Columbia Broadcasting System, a series of colored television presentations. These programs, transmitted on a closed circuit to the profession in selected cities in Northeastern United States have received many favorable comments. Dr. George H. Humphreys, Dr. Milton R. Porter, Dr. Harold D. Harvey, Dr. Robert S. Grinnell and Dr. Cushman D. Haagensen took part.

During the year, 48 papers were published by 17 members of the staff, and over one hundred meetings were attended at which 117 papers were read. Especially noteworthy was the meeting of the International Society of Surgery and the International Society of Angiology held at Lisbon in September, at which papers were presented by Dr. Arthur H. Blakemore, Dr. Edward L. Howes, Dr. Margaret R. Murray and Dr. Ralph A. Deterling, Jr.

The current high level of activity of the staff provides an answer to

the fear that the shift from partial full-time support to the modification which became necessary last year would result in decreased productivity. The level can be maintained, however, only by the exercise of constant vigilance to improve the effectiveness of each member of the staff. Improvements in scheduling to prevent conflicts of assignment or too wide a spread of simultaneous responsibility have accomplished much, yet the need for further effort in this direction is clear. At the same time a few other long recognized needs stand out with increasing clarity. Chief among these is the need for expanded office space. The limited space available on the fourteenth floor stem now forces three or more men to share facilities in each office to their mutual inefficiency. The need for additional secretarial help is accentuated in the operating room area where the increased work load has led to a serious delay in completing records, but the need is also real in the clinics where doctor efficiency and adequate record keeping are equally important. Improved methods of operating room management are also currently under study by the operating room committee and may be expected to further reduce waste of operating room and personnel time. In this area adequate numbers of ancillary personnel are still lacking, but the Nursing Service has this year achieved an adequate strength and with it a fine spirit and efficiency.

UROLOGY

GEORGE F. CAHILL, M.D., *Director*

Dr. Ralph J. Veenema, Dr. Stanley B. Braham and Dr. Alex L. Finkle have been appointed Assistant Urologists in the Hospital; Dr. Arthur T. Willetts and Dr. Robert Kollmar have been appointed Assistants in the Vanderbilt Clinic; Dr. Harry Seneca, formerly Research Associate, has been appointed Assistant Professor in the Department of Microbiology and has been assigned to Urological Service.

The marked increase in the diagnostic demands by other Services has continued during the year, especially in the use of newer methods in diagnosis but readjustment of the laboratories has produced an increased efficiency in their work. Continued overcrowding is still present in the Out-Patient Clinic.

During the year in association with the Medical College, Dr. Seneca carried out studies in antibiotic activities, anti-tuberculosis drugs, on actions of certain steroids, compound E and F, enzyme factors with polysaccharides. In the antibiotic field he completely worked up the spectrum of Thiolutin and Rimocidin. Both of these antibiotics and particularly Thiolutin are extremely effective against bacteria, fungi and protozoa. Thiolutin has also been found active against flagellates (trypanosomes, leishmania, trichomonas and ameba). Clinical trials are in progress using Thiolutin in trichomous infections. The results of the effects of 15 antibiotics has been determined upon trichomonas vaginalis and foetus. Attempts have been and are being made to obtain and isolate substances from saprophytic and pathogenic protozoa. Studies were made upon the concentrations of antibiotics in the testes of animals, and their effects upon spermatogenesis. Dr. Seneca has investigated the effect of isonicotinic acid hydrazide upon the protozoa in cultures; he also has continued to investigate further the effects of cortisone upon animal resistance. He has shown that in an animal which is naturally immune against a pathogen, this pathogen may not be destroyed but may be in a constant state of inhibition or depression. When a shocking dose of cortisone was administered to such an animal after an interval of several months from the introduction of the pathogen, such an animal developed an acute fatal infection from the pathogen. This is a suggestive way in which a harbored virus or other pathogen may be activated in ordinary human life. The effect most probably has been through the glucocorticoids. He has shown that Compound S (17 hydroxy 11 desoxycorticosterone)

does not depress the imune mechanisms of an animal, so that if Compound S is given a week or ten days prior to the administration of cortisone (E), the animals may be protected against the harbored pathogen.

Also it was shown that it was feasible to produce a fatal amebiasis in mice, which are usually resistant, with cultures of endameba histolytica when injected at the same time with cortisone and penicillin. Efforts are being made to isolate collagenase, an enzyme, from bacterial cultures so that it may be used experimentally. A vorticella-like organism has been isolated from the surface of a snail (Australorbis globratus) which has the power to dissolve the shell. The active factor of the organism is being sought for experimenting upon urinary calculi in man. The isolation of a potent proteolytic enzyme from the cercaria of schistosome is being done. A polysaccharide fraction (pyrogenic factor) has been obtained from protozoa and is being used as an adrenal cortical stimulant.

A study of cortisone analogs in relation to their anti-infective and anti-carcinomal properties is being done. This has received considerable interest since it has been shown that human cancer will grow in animals under the influence of cortisone. Studies upon the identification of organisms by their specific proteins by paper electrophoresis or paper chromatography are being carried out.

Dr. John K. Lattimer has continued his studies upon genito-urinary tuberculosis both in the Hospital and at the Kingsbridge Veterans Hospital, where he is the Attending Consultant to the comprehensive research project on the chemotherapy of genito-urinary tuberculosis. He has reported results of these six year studies in various scientific journals. The treatment of renal tuberculosis with isoniazid, streptomycin and PAS has been described with the principles involved in the use of each. They also reported the roentgenological classification of tubercular lesions of the kidney and upon the value of partial nephrotomy for tuberculosis when done under the cover of chemotherapy. Their exhibit upon the chemotherapy of renal tuberculosis received a prize at the American Medical Association Annual Convention in New York in June, 1953. Dr. Lattimer, at the same meeting, also read a paper and exhibited a movie upon the radical retropubic operation for cancer of the prostate gland.

At the meeting of the American Urological Association in St. Louis in June 1953, Dr. Lattimer presented a study covering 2,000 cases of pediatric urology at the Babies Hospital and the Squier Clinic. Collaborating in the problem of congenital hydronephrosis in conjunction with Dr. James B. Campbell of the Neurological Surgery Service, he has approached this vexing problem from a new neurological angle. During the year he

wrote the chapter on the treatment of genito-urinary tuberculosis for the medical book *Current Therapy*. He gave addresses upon the subject before many medical organizations; The University of California, Leland Stanford University, International College of Surgeons, Ohio State Medical Association, American Academy of Tuberculosis Physicians and the Government Symposium upon the treatment of tuberculosis. He conducts the Resident Staff Journal Club Meetings, and gives the annual lectures on urology to the Presbyterian Hospital School of Nursing.

Dr. Perry B. Hudson's group working in the laboratories of the College and in the Francis Delafield Hospital have their cancer research projects supported by grants-in-aid and contracts from the Atomic Energy Commission, The United States Public Health Service, The American Cancer Society, The Damon Runyon Memorial Fund, The New York City Cancer Committee, The American Urological Association, The City of New York and the Adrenal Physiological Research Gift Fund, through the McAndrews Forbes Company and the Schering Corporation. During the year Dr. Hudson has participated in panel discussions or given lectures upon topics dealing with genito-urinary cancer at Cornell University Medical College, McGill University and Royal Victoria Hospital, The Johns Hopkins Hospital, New York Hospital, and many local and county societies. With various members of the staff he has judged the effect of adrenalectomy upon prostatic cancer in which they concluded that it is but rarely indicated. They are still studying its effect upon mammary cancer; devising and reporting upon a new approach to the adrenal for its removal; and studying the blood from the adrenal vein with its steroids. Dr. Hudson has collaborated with Dr. Seymour Lieberman of the biochemistry assigned to the Department of Obstetrics and Gynecology, in the isolation of material from the urine obtained from adrenalectomized patients maintained upon cortisone. He has recently coauthored a book on *Surgery of the Adrenals* with Dr. William Wallace Scott of Johns Hopkins University. The studies of the synthetic enzyme systems in the human gland have continued in collaboration with Dr. John M. Reiner of the Department of Biochemistry.

Dr. Meyer M. Melicow presented a study of bladder tumors before the South Eastern Urological Association in its meeting in Havana, Cuba in April 1953. He also partook in a seminar discussion in Maine on exfoliative cytology as applied in diagnosis of carcinoma of the urinary tract. He presented a paper upon pheochromocytoma at the Annual Meeting of the American Urological Association at St. Louis. He contributed a study with Dr. Cahill upon plasmacytoma of the testis. During the

Twenty-fifth Anniversary Celebration of the Columbia-Presbyterian Medical Center, Dr. Melicow was Chairman of the Committee on Exhibits and published a guide booklet of the exhibits. He also arranged an exhibit with Dr. Cahill on the pathology of the adrenal gland. The seventy-three scientific exhibits covering many phases of medicine, surgery and endocronology were very popular and well received.

Dr. Charles T. Hazzard was elected President of the New York Urological Society. He was appointed Chief of Urology, Vanderbilt Clinic, and representative of Urological Service on the Staff Committee of the Presbyterian Hospital. Dr. John N. Robinson served as chairman of the Public Relations Committee of the American Urological Association. He also was reappointed as Chief Consultant in Urology for a five year term to the Veterans Administration and was elected a member of the Board of Governors of the American College of Surgeons. He presented a study upon cryptorchid testis at the American Urological Association Meeting in conjunction with Dr. Earl T. Engle and with Dr. Engle had an exhibit upon testicular biopsies at the Twenty-fifth Anniversary. He presented the results of a study upon the use of solusponge in urological procedures before the American Association of Genito-Urinary Surgeons.

Dr. George W. Fish was elected a member of the Board of Governors of the American College of Surgeons, and also a Trustee of the Research Society of Urology Incorporated. He, in association with Dr. Hudson and Dr. John Hopkins reported upon the surgery of carcinoma of the penis and a study upon the use of large oral doses of diethylstilbestrol in prostatic carcinoma.

Dr. Cahill served as President of the American Urological Association at its annual meeting in St. Louis. He continued as one of the original trustees of the American Urological Research Foundation, Incorporated. He continues as a member and trustee of the Board of Urology and during the year was elected as President of the American Board of Urology. He participated in a symposium and presented the results of his studies upon adrenal tumors at the meeting of the American College of Surgeons in Boston. He also presented papers at the meeting of the Mid-Atlantic Section of the American Urological Association at Roanoke, and the South Eastern Section in Havana, Cuba. He reported upon the studies on pheochromocytoma before the North Central Section of the American Urological Association and presented papers at the Annual Meeting of the State Medical Association in Florida.

Since the Urological Service was opened in 1928 there have been 35,700 admissions, of which 25,009 were new cases. During the year there

were 1,743 admissions, of which 565 were admitted to the Wards, 553 to Semi-Private, 284 to Harkness and 341 to Babies. During the year there were 783 consultations, 782 operations, 1,817 cystoscopies. There were 39 deaths (2.2% of admissions), and 19 following operations (2.6%). There were 6,417 X-ray examinations and 13,270 laboratory tests. The latter were 3,600 more than the previous year.

The Service wishes to express to the Trustees of the Presbyterian Hospital and its Executives and to the number of friends who so kindly contributed to its maintenance and to its studies, its thanks and gratitude. We especially wish to thank the Charles Pfizer Company for its generous donations, and our good friend Mrs. Mary Lasker for her general past support. We also wish to thank Mr. Richard Blow and Mr. John L. Given for their contributions. The Director wishes also to express his thanks and gratitude to the Honorable Joseph E. Davies for his generous gifts. To the members of the Staff, both professional and non-professional thanks is given for faithful services during the year.

Reports of Voluntary Organizations

The Alumnae Association School of Nursing

The year 1953 seemed dominated once again by commemorating events—the Twenty-fifth Anniversary of The Columbia-Presbyterian Medical Center—and all alumnae of our school should be proud indeed to be a part of and connected with the high standards and achievements in nursing that were exhibited and demonstrated at the Nursing Program held in Maxwell Hall on October 12, 1953. A complete report on these activities has been presented, but the exhibit of the Alumnae Association should be included here. Miss Cecile Covell, '26 headed the committee on arrangements for the exhibits and a huge map of the United States showed the distribution of our graduates throughout this country; a map of the World also depicted the global aspect. Statistics were presented on colorful charts showing what per cent of the alumnae are married, working professionally, in what branches of nursing, et cetera. The total number of graduates is 3,088 and those living total 2,812. Of this last figure 1,999 are active members of the Alumnae Association. This high per cent of members—71 per cent—is credited to the constant efforts of Miss Helen Young to keep in touch with the alumnae and evidence of the loyalty and interest of our graduates. Of course it would be fine to have this figure 100 per cent—something to work for!

While events are thus celebrated, the inspiration of certain personalities is bound to be felt and at this time Miss Young was honored at the Academic Convocation which was held on Tuesday afternoon, October 13 in the garden. The Hospital and the University jointly awarded her one of the 25 distinguished service medals—the only woman recipient. We who have worked under her guidance as students and with her afterwards all know how very deserved is this recognition of one who has won her place in the hearts of all alumnae.

The Alumnae Autobiographical Register was compiled and edited during this year. Untiring efforts by Miss Winifred Kaltenbach and Miss Covell resulted in the wonderful return of questionnaires from 94 per cent of our graduates. With such a wealth of material the job of publishing this register was tremendous and will be of great value for some time to come.

The Alumnae Association has contributed $1,000 to the Bicentennial Fund for Medical Sciences to pay for a chair in Convocation Hall in memory of Miss Anna C. Maxwell.

Three meetings of the Alumnae Association were held in Maxwell Hall during 1953. On February 19, after a short business meeting, Miss Rosamund Gilder spoke on Current Trends in the Theatre. Miss Gilder is former editor of the Theatre Arts Magazine and is still active in promoting and aiding the theatre world. Her discussion was most interesting and was made very entertaining by her humor and great knowledge of the subject.

The Alumnae Association was delighted to entertain the graduating class at a dinner dance held at the Hotel Pierre on the evening of June 3. This class was mentioned as the 100% class—exactly 100 graduates and we could easily see 100 per cent attractive! Miss Margaret Eliot again was chairman and was helped by Mrs. Virginia Bunn Smith '43 and Miss Eleanor Lee. Mr. W. E. S. Griswold, Jr. as toastmaster created an air of good humor as he called on Mr. John Sloane, member of the Board of Trustees and a great friend of the Hospital, to speak. A gift from Mr. Russell C. Leffingwell of an original Currier and Ives print of Florence Nightingale's home Lea Hurst was presented at this time for the Nightingale collection in memory of Dr. Hugh Auchincloss, Sr. After Dr. John K. Latimer, honorary class member of '53, Miss Lee and Miss Eliot each welcomed and congratulated the class, the evening was turned over to dancing.

June 5 was Alumnae Day with reunion classes meeting for lunch and then attending the Annual Meeting of the Association at which time the Officers and Committee Chairmen presented their reports. Miss Young and Miss Eliot were hostesses at luncheon to the classes of 1898, 1903 and 1908. Miss Georgia Bellinger, 1898, represented her class on their 55th reunion. Mrs. Conyers Pritchett Hedge, '03 the 50th and Mrs. John H. Knapp (Lillian Merrill '08) the 45th. We are so grateful to the class of 1898 for their most generous contribution to the Distributing Fund of $105.00. When the class of 1953 was presented for membership, Miss Ruthanne Farrell responded to their welcome and presented the composite picture of the Class and the following gifts to the School: two beautiful lamps and leather blotter sets for the Reception Desk at Maxwell Hall, a gift of $200.00;—$100 each to the Classes of 1954 and 1955 for a scholarship during the Senior year, and $100 to the Alumnae Distributing Fund. They also gave $125.00 to the Phyllis Lee Partridge Memorial Scholarship Fund in honor of their class advisor, Miss Ruth A. Lynch.

The Alumnae have lost through death eighteen members in the year 1953. The friends of Miss Jane Durham contributed $52.00 for the Helen Young Scholarship in lieu of flowers at her service. Miss Ruth Williams,

formerly Director of Nursing of the Institute of Ophthalmology, died in September. Dr. Henry Sloane Coffin conducted a memorial service in the Chapel on November 9. She left an annuity to the Association for a student scholarship. In addition, her friends have contributed $700.00 towards this scholarship.

At the Annual meeting the following officers were elected for the coming year: President, Mrs. Allen M. Look; Vice-President, Mrs. Frank E. Smith; Corresponding Secretary, Miss Lilian Oring; Recording Secretary, Miss Ruth A. Lynch; Treasurer, Miss Helen Young; Assistant Treasurer, Miss Margaret Wells.

Alumnae Scholarships from the income of the Emma Baker Kennedy Scholarship Fund, the Helen Young Scholarship Fund, the Distributing Fund and the Richard William Walsh Scholarship amounting to $2,375.00 were awarded in 1953. The Distributing Fund received contributions of $8,089.70 in 1953.

We are again most grateful to the Board of Trustees and to the Hospital for their support and advice with administrative details of the Alumnae Association.

Maria A. Look, '32,
President.

Board of Women Managers of the Babies Hospital

The Twenty-Fifth Anniversary Celebration was the outstanding event of the year for Babies Hospital, too. We were proud to have Mrs. Frederic F. deRham chosen as Chairman of Women's Auxiliary activities. Many members of the Babies Board participated in the organization and planning of this prodigious celebration. And on the memorable days of the Twenty-Fifth Anniversary Celebration, October 12 and 13, they assisted in many ways.

It may be interesting to look back even beyond twenty-five years, to refresh our memories of the early days of Babies Hospital. The Hospital was founded by women in 1887. It started with eight beds. The first Board of Managers came in one year later, 1888, succeeded in 1894 by a Board of Directors, composed of both men and women, although they were still aided by a Board of Lady Managers. In a few years, however, the word Lady gave way to Women and we then became known, as we are now, as the Board of Women Managers.

Mrs. Ernest R. Adee has been a member of the Board since 1899 and is a staunch and faithful associate.

We find among the 25 Year Club members, the following names on the present Board: Mrs. Ernest R. Adee, Mrs. Frederic S. Battershall, Mrs. Neville J. Booker, Mrs. Casimir deRham, Mrs. Frederic F. deRham, Miss Katherine B. Lockwood, Mrs. Roswell Miller, Mrs. Grover O'Neill, Mrs. Thomas E. Satterthwaite, Mrs. Henry C. Taylor Mrs. Carll Tucker.

And, looking to the future, we are happy to have as members of the Board, daughters, daughters-in-law and granddaughters of active members. These are Mrs. B. Rionda Braga, Mrs. Fred L. Heyes, Mrs. Alexander L. Keyes, Mrs. DeForest Manice, Mrs. Carll Tucker, Jr.

Today, Babies Hospital has 220 beds, including those for orthopedic patients, and occupies twelve floors. The Staff includes eighty-three doctors, fifty-three graduate nurses, 124 student nurses, and other personnel totalling about 100, devoting themselves to the care and study of sick infants and children up to thirteen years of age.

During the year 1953, the Board has continued its support of the Recreational Therapy Department, Pediatric Psychiatric Clinic, Emergency Nursing Fund, Cleft Palate Fund and Christmas Doll Fund. Our members take an active part in the United Hospital Campaign.

We are most grateful for the generous gifts which the Hospital has received during the past year. Members of our Board have given financial support to the General Fund of the Hospital and to the Emergency Nursing Fund; and have contributed gifts and furnishings to the Recreational Therapy and X-Ray Departments, the Nursing Offices and the Residents' Lounge. Other gifts were received from the Brearley School, Miss Hewitt's Classes, the New York Telephone Company, the School of Dental and Oral Surgery of Columbia University, the Associated Hospital Night Utilities Department and the Bank of Manhattan.

With great regret we have received the resignations of Mrs. Charles V. Hickox and Mrs. Neville J. Booker. Mrs. Hickox has been on the Board since 1932; she is, we are glad to say, continuing to be most generous and faithful in her interest in the welfare of the Hospital. Mrs. Booker leaves us after twenty-one years of active service, having been a Vice-President and Chairman of the House Committee for many years.

We welcome four new members to the Board: Mrs. Anne T. Wood, Mrs. Carll Tucker, Jr., Mrs. B. Rionda Braga and Mrs. Robert Bacon Whitney.

A New Service: Several months ago an evening volunteer program was initiated by Dr. Saul Blatman, Resident Pediatrician, assisted by Miss Laura Vossler, head of the Volunteer Department. A group of volunteers who have become known as the Play Ladies work with the children on the wards five evenings a week between the hours of six and eight—games and materials are supplied by the Recreational Therapy Department. This program is progressing most satisfactorily, and is filling a real need for the young patients in the period before they go to sleep.

To Dr. McIntosh, Miss Peto and Miss Callahan we extend special thanks and appreciation for their constant interest and helpful co-operation.

Catharine P. O'Neill,
President.

Cribside Social Service Committee of the Babies Hospital

October 1953 marked the Twenty-fifth Anniversary of the Presbyterian Medical Center and while the Cribside Committee of Babies Hospital has been functioning since 1887, we were particularly glad and proud to participate in this celebration. Mrs. Conrad M. Riley was in charge of the two luncheons, and headed a group of hostesses who welcomed the visitors.

In spite of receiving $6,567.63 from the United Hospital Fund, and $8,384.41 from the Greater New York Fund, for which we were most grateful, we found it very difficult to meet our budget due to increased expenses. Miss Dorothy Mills was the able group leader for Babies Hospital, and we were most grateful to Miss Hope Kingsley for taking charge of Box Week, as well as being a team captain for the United Hospital Fund Compaign.

The receipts for the Nearly New Shop have unfortunately decreased to $752.25. We are now on a different basis at the shop, receiving 50 per cent of the amount we bring in, with no overhead obligation.

Mrs. Leroy K. Howe took charge of the Lenten Sewing classes, which brought in $616.94. We are most grateful to her and to our friends, who opened their homes to the meetings.

We received $262.05 from the United Cerebral Palsy which covered the transportation of 74 of our patients to and from clinic. The Walter Scott Foundation contributed $124.95 for a brace and wheel chair for one of our patients.

In addition to several donations that have been of great assistance annually, Mr. William Golden contributed $50.00.

The demands of the Department seem to have been more adequately met by the addition of a new social work position. The increase in salary scale has helped us to secure a capable worker and has added greatly to the contentment of our present staff.

During 1953 we placed 301 patients for convalescent and other care, of which 61 went to the Mary Harkness Convalescent Home. The expenses for this (exclusive of Mary Harkness) amounted to $2,087.42, of which parents refunded $1,104.13. Miss Janet Schubert was again responsible for the yearly camp program from which so many Babies Hospital and clinic patients benefited.

Social Service in the Pediatric Clinic has been greatly facilitated by our new office which affords us more working space.

The Cribside Committee is deeply grateful for the untiring effort and understanding of Miss Mildred Stilwell, Director of the Department, and for the unfailing cooperation of her able staff.

EDITH B. FENNELLY,
Chairman.

The Mary Harkness Convalescent Home Auxiliary

When the Mary Harkness Convalescent Home first opened in 1937, it accommodated only adult patients desiring quiet convalescent care in the country. In 1952, the Strong Memorial Wing for convalescent children was added. The adult section now accommodates thirty-five patients and the children's wing twenty-two. It is modernly equipped with treatment, physical and occupational therapy rooms, and is located in a beautiful country setting, having little of the institutional atmosphere. There is a school room for the children and a teacher, supplied by the State, is there every morning from Monday to Friday.

Four members were appointed to the Auxiliary at the annual meeting on March 23, 1953—Mrs. William Bristol, Jr., Mrs. James S. Alexander, Mrs. Howland O. Walter and Mrs. Benjamin Strong. Three additional members were appointed at the May meeting—Mrs. Jeremiah Milbank, Mrs. Edward F. Lethen, Jr. and Mrs. Nelson W. Millard.

Miss Marie C. Byron, who had been superintendent of the Home for a number of years retired in July, and Miss Miriam Hubbard was appointed to take her place. Miss Hubbard has been with the Medical Center for twenty years, and for the past twelve years has been Head Nurse and Instructor in Pediatric Urology. Though we were very sorry to have Miss Byron retire, we feel we are exceptionally fortunate in Miss Hubbard's appointment.

The plant and facilities are, in general, in excellent condition. The Strong Memorial Wing is, of course, still new, requiring little attention this year. However, the decorating in the main building needed attention, as nothing had been done in fifteen years. The living room and the library were redecorated, as was recommended by the Committee. In the living room, new scenic wallpaper was put on, the woodwork painted, new rug, draperies and slip covers replaced old ones. In the library on the second floor, new cushion covers and window draperies were made. A rug and two easy chairs were donated by one of the committee members, and the room, which previously was hardly used, is now a favorite spot.

A Christmas party with tree, presents, refreshments and the singing of Christmas carols was enjoyed by all.

This year we are very grateful to the Cancer Committee for gifts of dolls and toys to the children in the Strong Memorial Wing.

Laura B. Strong,
Chairman.

Neurological Institute Auxiliary

The Neurological Institute Auxiliary is pleased to report that the staff of the Social Service Department is now at a full complement after suffering up to 50 per cent depletion for some time due to the prevailing shortage of trained social workers, which has hampered the work of all such departments in hospitals throughout the city. Despite being handicapped by shortage of personnel for most of the year the department has handled a case load of 1,236 patients in 13,989 interviews, and immeasurable credit is due to the devoted and untiring service of all the members of the staff under Miss Mercedes G. Geyer's able and reassuring supervision for rendering an even greater volume of service to patients than was done last year.

One bright feature of the Social Service Department's having been confronted with more work and fewer people to do it is the fact that in order to meet the demands of the doctors for the department's service to patients it was possible, through careful scrutiny of activities and techniques in terms of function, to streamline the mechanics of the work and enable the staff to function with a greater degree of efficiency. The improvements instituted and the lessons learned in this way will continue to benefit the work of the department.

The committee is proud of the ever-continuing devotion of the whole staff of the Social Service Department and of the fact that they have not only achieved notable success in their work with patients but through the training of four advanced students from the New York School of Social Work and through participation in various outside conferences have spread afar the influence of the Neurological Institute's principles of Social Service.

An increase of $250.00 over last year in the donation received from the Society for the Relief of Women and Children, added to other camp funds, enabled us to send twenty-three epileptic children to camps during the summer as compared to eighteen last season. The benefit of this group experience to children with seizures has been well established due to the pioneering work in the field done by our Social Service Department. An annual donation of $150.00 from the Havens Fund, through Mrs. Charles E. Adams' aegis as almoner, has been of great benefit.

The Neurological Institute Auxiliary has received $6,137 from

its participation in Everybody's Thrift Shop as against $7,691 last year. Again Mrs. Royall G. Cannaday and her committee have given unstintingly of time and effort to realize this major contribution toward the running of the Social Service Department. Mrs. Thorneycroft Ryle and Mrs. Willis D. Wood each most generously gave a tea-and-cocktail party in her apartment to which people were asked to bring rummage. Large amounts of both rummage and enthusiasm redounded most advantageously to the benefit of the committee's share in Everybody's Thrift Shop.

With Mrs. Bruce Brodie as our liaison with the Milbank Library the patients in the Neurological Institute have been regularly supplied with a suitable variety of books, magazines and pictures all of which serve to lift their morale as well as to while away weary days of convalescence.

Mrs. Wood, the representative of the Neurological Institute on the House Committee of the Medical Center, has done much to bring to the fore the physical needs of the hospital and to see that as many of them as possible are met.

Two teams of twenty-three members have again participated in the United Hospital Fund Campaign and have, to date, raised $17,936.61 representing 88 per cent of our quota as compared to 83 per cent of our quota attained last year. Mrs. Stuart Preston continued as chairman for Box Week and not only enlisted the necessary volunteers but spent a great deal of time herself in soliciting at the location assigned.

Members of the Auxiliary were pleased to have a part in helping toward the success of the tea in Maxwell Hall for members of the staffs of welfare agencies cooperating with the Social Service Departments of the Medical Center, and are particularly proud that Mrs. Charles E. Adams did so diligent and successful a job as chairman of the tea at the time of the Twenty-fifth Anniversary Celebration.

That four members of the Auxiliary, Mrs. Royall G. Cannaday, Mrs. Edward P. Farley, Mrs. Reginald E. Wigham and Mrs. Willis D. Wood, qualify for the 25 year club gives us a very gratifying sense of continuity of service in the cause which means as much to all of us. They join with the rest of the committee in gratitude to the staff of the Social Service Department of the Neurological Institute and in appreciation of the privilege of sharing in the vital work of the Hospital.

Helen Hoyt Stookey,
Chairman.

The Women's Auxiliary of the New York Orthopaedic Dispensary and Hospital

Our committee has been very interested in the recreational program in the babies' wards. Under the able direction of Mrs. Helen Smith Vechter and with the cooperation of everyone connected with the project, our play porch is proving its worth.

The Hospitals and Mrs. Vechter joined forces in the decoration of the porch and we have gay colors, hand painted animals on the shades (by Mrs. Vechter) and broad shelves. Mr. Frederick A. O. Schwarz gave us wonderful things to fill these shelves—as did other friends—but the need for records and holgate-type toys is unabated. Flower-boxes, where the children can watch and care for growing things, are on the agenda.

There have been several gay parties. The Tootsie Hippodrome T.V. Show was an event as well as a performance of puppets, made and manned by the small patients themselves. We have music of all kinds and are using toy "baby grands" with color keys to start the children on piano lessons!

A beautiful new projector was given in memory of Mrs. Percy Pyne. Regular movies are shown in the adult wards and suitable programs arranged for the little ones.

The Social Service under Miss Helen Irwin has done a wonderful job. Miss Irwin expends a small fund for Christmas for out-patients with real understanding and we have the pleasure of hearing her reports on various cases at our meetings. We filled stockings for all our younger patients.

We had one all-day meeting which included lunch and a visit to the clinics and another time Dr. Alan DeForest Smith showed us a film taken by Dr. James B. Jones about a new scoliosis technique. Being able to meet in the fifth floor conference room makes a lot of difference. We have met almost entirely at the Hospital as we felt it kept us more "in touch", but we thank the National City Bank for its hospitality.

We received some pictures from the United Hospital Fund Committee on Art and wish to convey our thanks.

The Committee has presented a gift of cups and spoons to the nurses' pantry in memory of Miss Isabel Bishop, former director of nurses at the Orthopaedic Hospital.

Mrs. Shirley C. Fisk and Mrs. S. Hazard Gillespie, Jr. worked on the tours for the Twenty-fifth Anniversary celebration.

The United Hospital Fund team under Mrs. Edward H. Gerry and Mrs. William R. Kirkland, Jr. did an outstanding job, as did Mrs. Harry S. Fowler with Box-Week. We received $10,880.94 from the United Hospital Fund and the Greater New York Fund in 1953.

Mrs. Charles Van Pelt has been granted a leave of absence and we accept the resignations of Mrs. James J. Casey and Mrs. James McVickar with regret. Mrs. McVickar served as our United Hospital Team captain for several years and did invaluable service.

We welcome Mrs. James Cogswell, Mrs. Robert J. McKim, Jr. and Mrs. Charles D. Halsey, Jr. as new members.

This has been a good growing year for us all and to Miss Delphine Wilde, Miss Hester Ann Brown and all the Orthopaedic Family we wish to say that we are proud of being an "auxiliary".

Frances Reese,
Chairman.

The Women's Auxiliary of the Presbyterian Hospital

I should like to do honor to the forty-nine active and twenty-five associate members who have given a vast amount of time, thought and effort to making this a particularly significant year. Extra meetings were held and many members took on responsibilities in addition to those they already carried. A number of members serve both as service volunteers within the Hospital and as workers on one or both of the fund raising activities of the Auxiliary. All deserve special mention but to single out those who have been most helpful a list should certainly include Mrs. Ralph H. Boots, Mrs. Paul B. Sheldon, Mrs. Rudolph N. Schullinger and Mrs. Jerome P. Webster. The four new members who were elected are Mrs. Streseurenter Butler, Mrs. Louis Connick, Mrs. Stuart W. Cosgriff and Mrs. Robert S. Grinnell.

The Milbank Library loaned books and magazines to 21,423 patients and 5,378 members of the staff. Ceiling projectors and prismatic glasses were loaned to patients who would otherwise not have been able to read. Patients chose 3,258 pictures which were mounted on the walls near their beds. Books were sent to patients who were visited in their homes by the visiting nurses. The pleasant reading room with its radio, phonograph and collection of classical records, was used by 7,534 patients and members of the staff. Two subscriptions to the Spanish-Book-of-the-Month-Club added thirty-four new books to the Spanish collection for which there is an increasing demand. During Christmas week recordings and readings of appropriate stories were broadcast over Channel 1 of the Hospital Broadcasting System. These services were made possible by the twenty-three trained and devoted volunteers under the chairmanship of Mrs. I. Louis Kramer and the guidance of Mrs. Yolanda McKnight, the Librarian.

The Occupational Therapy Department, under Mrs. Helen White's direction, has six trained therapists who limit their work to treatments for patients who have functional or psychological needs. In order to provide recreational therapy for long term patients a carefully selected group of volunteers was organized to work under the direction of Miss Richardson, the trained therapist of the in-patient shop, who shortly became Mrs. Richardson and resigned after many years of devoted and effective work in the department. Miss Eunice Ford is Mrs. Richardson's successor.

The Social Service Department is under the direction of Miss Mercedes G. Geyer. The role of the social worker is to interpret the treatment and recommendations suggested by the physician, to the patient in terms of his physical, financial and family limitations, and to bring into action the services of those public and private agencies which are needed in order that he may derive the greatest possible benefit from the medical care given to him by the staff of the Hospital. Each patient in the wards is interviewed shortly after admission to ascertain if he has any social problems that might delay his recovery or need adjustment before his discharge. Clinic patients are seen if they are referred by the doctor to the social worker.

The Social Service Committee, of which Mrs. Ralph H. Boots is Chairman, meets monthly with Miss Geyer to discuss program and policies. The second half of the meeting is devoted to a report of a social worker from one of the services who describes in detail her particular function and problems. We are very grateful to the Department members for their gracious cooperation.

Mrs. Yale Kneeland and Mrs. Samuel W. Lambert continue as almoners for the Havens Relief Fund through which $1,200 was given in 1953 and was used for the rehabilitation of sixteen patients.

Mrs. Leo C. Fennelly of the Cribside Committee was Chairman of the very successful meeting and tea to which the Social Service Departments invite representatives of the public and private agencies with which they have worked during the year. It is hoped this will continue to be an annual event.

The Volunteer Department has taken tremendous strides in the past few years under the Chairmanship of Mrs. George A. Perera. When we consider that the volunteer hours have increased 20 per cent over 1952 and 96 per cent over 1950 and that in 1953, 644 volunteers have served 68,316 hours in almost all departments of the Hospital, we must recognize that Miss Laura Vossler and her assistant, Mrs. Joan Netherly, have done a magnificant job. The Women's Auxiliary voted this fall to pay the salary of a second assistant who would supervise evening volunteers. It is interesting to note that there is a citywide increase in evening volunteers that is attributed to the present high level of employment. Two ward aid courses for evening volunteers have been given through the cooperation of the Department of Nursing. Our most interesting new field of endeavor was inaugurated in Babies Hospital this summer at the request of the resident staff who felt that an evening recreation program was needed for the children. Three floors have been covered five

nights a week. Dr. Saul Blatman and Miss Marjorie Peto, Assistant Director of Nursing, Babies Hospital, have cooperated by giving orientation lectures to the volunteers on this project.

At the United Hospital Fund Awards meeting in May, 102 Presbyterian Hospital volunteers received pins and bars; as of December 31, 1953, 149 volunteers received the Presbyterian Hospital Pin award for the first 100 hours of volunteer service. Twenty-five volunteers received special recognition for five years or more of volunteer service to the Hospital.

Mrs. Stanley M. Bysshe has succeeded Mrs. Theodore B. Russell as Chairman of the Nursing Committee. For some time the Auxiliary has wished to provide a recreation room for the women personnel of the Hospital. The administration has turned over the major part of the old Gymnasium on the twentieth floor for this purpose. A committee consisting of Mrs. Philip D. Wiedel as chairman assisted by Mrs. Hugh Auchincloss, Jr., Mrs. Robert H. E. Elliott, Jr., and Mrs. Jose M. Ferrer, Jr., is responsible for the planning and decoration of this area. They are also in charge of equipping three personnel locker rooms in order to make them more comfortable and convenient. It is expected these four projects will be completed in the early spring.

An offer was made by the Auxiliary and accepted by the Medical Board to establish an emergency loan fund for all members of the house staff except the Pediatrics Service which is already covered. No interest will be charged and the loan may be repaid at the convenience of the borrower. It will be administered by a committee consisting of one member each from the Medical Board, the Administration and the Auxiliary. It is hoped that the financial difficulties inherent in long residencies for young doctors who have wives and children may be aided by this Auxiliary fund.

The means with which to accomplish these aims were provided by the highly successful efforts of the Thrift Shop Committee and The United Hospital Campaign teams. The Auxiliary moved as of June 1 from Everybody's Thrift Shop to the Stuyvesant Square Thrift Shop at 38th Street and 2nd Avenue. In October Mrs. William L. Van Leer, Sr. and Mrs. Homer T. Hirst, who were responsible for great increase in income from rummage, resigned as co-chairmen and Mrs. Streseurenter Butler and Mrs. Robert S. Grinnell, both of whom have had extensive thrift shop experience, succeeded them. Our income from this source in 1953 amounted to $5,749.67.

Under the aegis of Mrs. Ralph H. Boots, who is chairman of Hospital

teams of the United Hospital Fund, Mrs. C. Redington Barrett as group leader, Mrs. Edgar Stillman and Mrs. James M. Breed as team captains, and thirty-one workers set out to raise $23,432, the quota for the Presbyterian Hospital. Together with the letter writing and Mrs. Breed's able managing of Boxes during Hospital week we have collected 673 contributions amounting to $20,373. The final results of the 1952 Campaign were not available at the time the 1952 Annual Report went to print.

The Twenty-Fifth Anniversary Celebration of the Medical Center was a great success in which many Auxiliary members were delighted to take an active part. Notably Mrs. Edgar Stillman and Mrs. Ralph H. Boots were in charge of the shopping and theatre service at the Columbia Club, Mrs. Howard G. Bruenn and Mrs. George A. Perera were in charge of Registration, and members of our own and the other auxiliaries, the Social Service Department, Volunteer Department, Surgical house staff wives, and many others took visitors on tour of the buildings.

All members of the Hospital Administrative Staff have cooperated with us no matter how large or small our problem. They are always available, sympathetic and helpful. The monthly luncheons are both pleasant and informative occasions. We appreciate the welcome extended to us at the Trustee meetings. As a result of these courtesies the Women's Auxiliary is more interested and hopes it is more useful in serving the Hospital.

Constance Bailey,
Chairman.

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Mr. Jay Herbert Kamins
Mrs. Anna Kaplan
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Mrs. Elsie McKiernan
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Miss Constance M. Murphy
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JOHN G. MCCULLOUGH
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*Frederick W. Hehre, Jr., M.D.
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Cyril Taylor, M.D.
Arthur Hazen Thayer, M.D.
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*Jack M. VanderWood, M.D.
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Celso Victor Zeni, M.D.

Clinical Fellow

Joseph Kreiselman, M.D.

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Arthur C. Totten, D.D.S.

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Edward A. Cain, D.D.S.
Kourken A. Daglian, D.D.S.
Robert E. Herlands, D.D.S.
L. Laszlo Schwartz, D.D.S.
Boaz M. Shattan, D.D.S.

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J. Lowry Miller, M.D.
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Edward W. Wilson, M.D.

Mycologist

Rhoda W. Benham, Ph.D.

Resident

Wilson A. Powell, Jr., M.D.

Assistant Resident

Elizabeth C. Jackson, M.D.

Visiting Fellows
Vanderbilt Clinic

Carol R. Bahcall, M.D.
William H. Garvin, Jr., M.D.
Harry L. Wechsler, M.D.

MEDICINE

Director of Service

Robert F. Loeb, M.D.

Attending Physicians

J. Burns Amberson, M.D.
Dana W. Atchley, M.D.
Franklin M. Hanger, M.D.
Yale Kneeland, Jr., M.D.
Robert L. Levy, M.D.
Dickinson W. Richards, Jr., M.D.

Associate Attending Physicians

**Walter P. Anderton, M.D.
Frederick R. Bailey, M.D.
Alvan L. Barach, M.D.
Ralph H. Boots, M.D.
Stanley E. Bradley, M.D.
**George W. Draper, M.D.
Charles A. Flood. M.D.
*William A. Gardner, M.D.
Samuel W. Lambert, Jr., M.D.
**Arthur E. Neergaard, M.D.
George A. Perera, M.D.
Charles A. Ragan, Jr., M.D.
Bertram J. Sanger, M.D.
David Seegal, M.D.
Paul B. Sheldon. M.D.
Martin DeF. Smith, M.D.
Joseph C. Turner, M.D.
Kenneth B. Turner, M.D.

Assistant Attending Physicians

**Louis Bauman, M.D.
Howard G. Bruenn, M.D.
George A. Carden, Jr., M.D.
**Armistead C. Crump, M.D
C. Dary Dunham, M.D.
Shirley C. Fisk, M.D.
Alfred Gellhorn, M.D.
Joseph W. Jailer, M.D.
Abbie I. Knowlton, M.D.
Putnam C. Lloyd, M.D.
Irving M. London, M.D.
Gilbert H. Mudge, M.D.
Robert Muller, M.D.
Arthur A. Patek, Jr., M.D.
Harry M. Rose, M.D.
Theodore B. Russell, M.D.
William B. Sherman, M.D.
Hamilton Southworth, M.D.
Franklin A. Stevens, M.D.
**Edgar Stillman, M.D.
John V. Taggart, M.D.
Rene Wegria, M.D.
Sidney C. Werner, M.D.
John R. West, M.D.
Herbert B. Wilcox, Jr., M.D.

Assistant Physicians

James K. Alexander, M.D.
Casco Alston, M.D.
Henry Aranow, Jr., M.D.
Alice T. Baker, M.D.
John M. Baldwin, Jr., M.D.
Eli Bauman, M.D.
Gustav J. Beck, M.D.
Viola W. Bernard, M.D.
Stuart S. Blauner, M.D.
Baruch S. Blumberg, M.D.
Geraldine P. Bradley, M.D.
Alfred E. Brewer, M.D.
Daniel N. Brown, M.D.
M. Edwina Campbell, M.D.
John W. Cederquist, M.D.
Henry P. Colmore, M.D.
Burton Cominsky, M.D.
Crispin Cooke, M.D.
Jean Corwin, M.D.
Stuart W. Cosgriff, M.D.
James A. Coss, Jr., M.D.
Lawrence H. Cotter, M.D.
Richard J. Cross, M.D.
Clarence J. D'Alton, M.D.
Albert Damon, M.D.
Felix E. Demartini, M. D.
*Richard B. Duane, Jr., M.D.
Samuel Dvoskin, M.D.
B. Ruth Easser, M.D.
Paul G. Ecker, M.D.
Edward E. Fischel, M.D.
Charles W. Frank, M.D.
Winifred H. Franklin, M.D.
Bettina Garthwaite, M.D.
Claudio Gerbi, M.D.
Menard H. Gertler, M.D.
Augustus Gibson, M.D.
Jay J. Gold, M.D.
Marcel Goldenberg, M.D.
Albert W. Grokoest, M.D.
John G. Hawley, M.D.
George C. Hennig, M.D.
Charles C. Hogan, M.D.
Hilary H. Holmes, M.D.
Edward Hornick, M.D.
Calderon Howe, M.D.
George A. Hyman, M.D.
Gwendolen S. Jones, M.D.
Aaron Karush, M.D.
Peter Kornfeld, M.D.
Robert A. Kritzler, M.D.
Albert R. Lamb, Jr., M.D.
John H. Laragh, M.D.
*Daniel L. Larson, M.D.
Edgar Leifer, M.D.
James Leland, M.D.
Michael J. Lepore, M.D.
Joseph Lubart, M.D.
Henry E. Marks, M.D.
James A. L. Mathers, M.D.

*Leave of Absence
**Inactive

Assistant Physicians, Cont.

Kenneth A. McClane, M.D.
James E. McCormack, M.D.
Robert B. McKittrick, M.D.
George W. Melcher, Jr., M.D.
Councilman Morgan, M.D.
Leon Moses, M.D.
Ruth E. Moulton, M.D.
Isidor Mufson, M.D.
Hans W. Neuberg, M.D.
Blaise A. Pasquarelli, M.D.
Kermit L. Pines, M.D.
Calvin H. Plimpton, M.D.
Fellowes M. Pruyn, M.D.
Helen M. Ranney, M.D.
Betty S. Roof, M.D.
Frederick H. Shillito, M.D.
Howard B. Shookhoff, M.D.
DeWitt H. Smith, M.D.
William H. Stearns, M.D.
Alfred Steiner, M.D.
Walter A. Stewart, M.D.
Richard J. Stock, M.D.
K. Jefferson Thomson, M.D.
Sylvia Gould Traube, M.D.
Cornelius J. Tyson, Jr., M.D.
T. Lloyd Tyson, M.D.
Eleanor Z. Wallace, M.D.
Paul Wermer, M.D.
Edward K. Williams, M.D.
Carl R. Wise, M.D.
John A. Wood, M.D.
Sadie H. Zaidens, M.D.

Attending Physicians
Vanderbilt Clinic

Louis Schneider, M.D.
Max Soley, M.D.

Assistant Attending Physicians
Vanderbilt Clinic

Edward E. Gordon, M.D.
Ernest F. Gordon, M.D.
Leopold Jordani, M.D.
Julia V. Lichtenstein, M.D.

Assistant Physicians
Vanderbilt Clinic

Stewart F. Alexander, M.D.
Roslyn Barbash, M.D.
Achsa M. Bean, M.D.
John T. Beaty, M.D.
Hylan A. Bickerman, M.D.
Winifred Bronson, M.D.
Richard M. Carey, M.D.
Henry Colcher, M.D.
John Van B. Dean, M.D.
*Peter M. Dean, M.D.
Henry W. Doyle, M.D.
Erna S. Enderle, M.D.
Dorothy Estes, M.D.
*Gilbert L. Gordon, M.D.
Artell E. Johnson, M.D.
Hans Kaunitz, M.D.
Maxwell J. Marder, M.D.
George C. McEachern, M.D.
Robert P. Noble, M.D.
Elliott F. Osserman, M.D.
Charles M. Plotz, M.D.
Morris R. Rapoport, M.D.
William H. Russell, M.D.
Sidney Schnittke, M.D.
Murray D. Shepp, M.D.
Cristobal A. Vicens, M.D.
William I. Weiss, M.D.

Attending Physician
Mary Harkness Convalescent Home

Herbert F. Wilshusen, M.D.

Chemists

Michael Heidelberger, Ph. D.
Karl Meyer, M.D.

Clinical Anthropologist

William H. Sheldon, M.D.

Podiatrist
Vanderbilt Clinic

Michael J. Petti, Pod. D.

Assistant Podiatrist
Vanderbilt Clinic

John J. Slevin, Pod.D.

Resident

George H. McCormack, Jr., M.D.

Assistant Residents

Helen M. Anderson, M.D.
Joseph J. Barlow, M.D.
John F. Bertles, M.D.
Jonathan S. Bishop, M.D.
Nicholas P. Christy, M.D.
George L. Collins, Jr., M.D.
John L. Decker, M.D.
Leslie J. DeGroot, M.D.
Robert A. Evans, M.D.
Winthrop A. Fish, M.D.
Gerald S. Foster, M.D.
Milford Fulop, M.D.
Leonard M. Gaines, Jr., M.D.
*Donald A. Holub, M.D.
*Ernst R. Jaffe, M.D.
Roger P. Lochhead, M.D.
Tor Richter, M.D.

*Leave of Absence

Assistant Residents, Cont.
Joseph C. Shipp, M.D.
Donald F. Tapley, M.D.
Henry O. Wheeler, M.D.
Joseph P. White, M.D.
Peter U. Wolkonsky, M.D.

Interns
Carl M. Barlow, M.D.
John H. Bryant, M.D.
Charles L. Christian, M.D.
Irving H. Goldberg, M.D.
Paul K. Johnson, M.D.
Joanne Lloyd-Jones, M.D.
Christopher Longcope, M.D.
Edwin P. Maynard, III, M.D.
Jay I. Meltzer, M.D.
William C. Mohler, M.D.
John I. Sandson, M.D.
William Pierce Smith, M.D.

Clinical Fellow
John R. K. Preedy, M.D.

Visiting Fellow
John R. Martin, M.D.

MICROBIOLOGY

Attending Microbiologist
Harry M. Rose, M.D.

NEUROLOGICAL SURGERY
(Neurological Institute)

Director of Service
J. Lawrence Pool, M.D.

Attending Neurological Surgeons
John E. Scarff, M.D.
Edward B. Schlesinger, M.D.

Associate Attending Neurological Surgeons
Thomas J. Bridges, Jr., M.D.
Fritz J. Cramer, M.D.
Lester A. Mount, M.D.
Joseph Ransohoff, M.D.

Assistant Attending Neurological Surgeons
Russell H. Blood, M.D.
James B. Campbell, M.D.

Resident
John H. Van Landingham, M.D.

**Inactive

Assistant Residents
Neal I. Aronson, M.D.
Rogaciano C. Basias, M.D.
Arthur F. Battista, M.D.
William K. Clark, M.D.
William H. Cook, M.D.
Carlos Cortelezzi, Jr.,M.D.
William Impey Porter, M.D.
Georges-Henri Reinhardt, M.D.

NEUROLOGY
(Neurological Institute)

Director of Service
H. Houston Merritt, M.D.

Attending Neurologists
Sidney Carter, M.D.
L. Beverly Chaney, M.D.
Angus M. Frantz, M.D.
Clarence C. Hare, M.D.
George H. Hyslop, M.D.
Rollo J. Masselink, M.D.
**Charles A. McKendree, M.D.
John McD. McKinney, M.D.
Irving J. Sands, M.D.
Carmine T. Vicale, M.D.

Associate Attending Neurologists
Francis C. Ansanelli, M.D.
William F. Caveness, M.D.
Earl C. Chesher, M.D.
Stanley M. Dillenberg, M.D.
Lewis J. Doshay, M.D.
William H. Everts, M.D.
Arnold Friedman, M.D.
Maurice Frocht, M.D.
Alfred Gallinek, M.D.
Justin L. Greene, M.D.
Ernst Herz, M.D.
Paul F. A. Hoefer, M.D.
Lothar B. Kalinowsky, M.D.
Samuel Reback, M.D.
Albert A. Rosner, M.D.
Leon A. Salmon, M.D.
Daniel Sciarra, M.D.
Maximilian Silbermann, M.D.
Michael H. Teitelbaum, M.D.
Samuel F. Thomas, M.D.
Hyman G. Weitzen, M.D.
Melvin D. Yahr, M.D.

Assistant Attending Neurologists
S. Muriel Baron, M.D.
Sue E. Browder, M.D.
Paul J. Buckley, M.D.
**Royall G. Cannaday, M.D.

Assistant Attending Neurologists, Cont.

Sidney M. Cohen, M.D.
Kate Constable, M.D.
James F. Culleton, M.D.
Zira DeFries, M.D.
Eli S. Goldensohn, M.D.
Sidney S. Goldensohn, M.D.
Christian Herrmann, Jr., M.D.
Werner Hochstetter, M.D.
Frank P. Iorio, M.D.
Stanley Lesse, M.D.
Theodore Lipin, M.D.
Paul Loewy, M.D.
**William Mayer, M.D.
Charles G. McKendree, M.D.
**Henry W. Miller, M.D.
Joseph Moldaver, M.D.
Hyman A. Osserman, M.D.
Bernard Pacella, M.D.
Raul Pietri, M.D.
Harry R. Potter, M.D.
Catherine E. Spears, M.D.
Frederic T. Zimmerman, M.D.

Assistant Neurologists

William Amols, M.D.
Ludwig V. Chiavacci, M.D.
Leon M. Golub, M.D.
Marvin A. Lewis, M.D.

Associate Attending Neurologist
Vanderbilt Clinic

**Florizel DeL. Myers, M.D.

Assistant Neurologists
Vanderbilt Clinic

Franklin S. DuBois, M.D.
**William R. Dyer, M.D.
Elizabeth B. Eken, M.D.
Murray Glusman, M.D.
Christina M. Leonard, M.D.
Joseph Livingston, M.D.
Robert B. Miller, M.D.
Geoffrey F. Osler, M.D.
Samuel A. Sandler, M.D.

Resident

Robert A. Fishman, M.D.

Assistant Residents

James H. Austin, M.D.
Stanley M. Ball, M.D.
Richard M. Esser, M.D.
Gilberto L. Gamez, M.D.
Eugene Gardner Jacobs, Jr., M.D.
Thomas Richards Johns, M.D.
Lowell Gerald Lubic, M.D.
Joseph Marotta, M.D.
Arthur Avrum Pava, M.D.

**Inactive

Charles Marcel Poser, M.D.
Labe Charles Scheinberg, M.D.
William A. Sibley, M.D.
Bernard J. Sussman, M.D.
Faith Cramer Walsh, M.D.

Clinical Fellow

James Henry Brown, M.D.

OBSTETRICS AND GYNECOLOGY

(Sloane Hospital for Women)

Director of Service

Howard C. Taylor, Jr., M.D.

Attending Obstetricians and Gynecologists

E. Everett Bunzel, M.D.
Charles L. Buxton, M.D.
Virgil G. Damon, M.D.
D. Anthony D'Esopo, M.D.
Harbeck Halsted, M.D.

Associate Attending Physician

Alvin J. B. Tillman, M.D.

Assistant Attending Obstetricians and Gynecologists

Stanley M. Bysshe, M.D.
William V. Cavanagh, M.D.
Saul B. Gusberg, M.D.
Marion D. Laird, M.D.
James R. Montgomery, M.D.
Equinn W. Munnell, M.D.
C. Paul O'Connell, M.D.
Albert A. Plentl, M.D.
John B. Rearden, M.D.
Harold Speert, M.D.
Charles M. Steer, M.D.

Assistant Obstetricians and Gynecologists

Joseph Blanchard, M.D.
Byron C. Butler, M.D.
Arnold N. Fenton, M.D.
Dean J. Grandin, M.D.
David B. Moore, M.D.
Landrum B. Shettles, M.D.
Anna L. Southam, M.D.
Susan W. Williamson, M.D.

Assistant Attending Gynecologist
Vanderbilt Clinic

Thomas J. Parks, M.D.

Assistant Obstetricians and Gynecologists
Vanderbilt Clinic
Robert Cowan Arrants, M.D.
Howard Lee Walker, M.D.

Residents
Robert Elliott Hall, M.D.
Robert L. Hallet, M.D.
Walter P. Kosar, M.D.
Harold M. M. Tovell, M.D.

Assistant Residents
Richard S. Banfield, M.D.
William C. Billings, M.D.
Stephen G. Burgess, M.D.
William J. Chase, M.D.
Ferdinand H. Flick, M.D.
Emanuel A. Friedman, M.D.
Caroline B. Hunter, M.D.
Herbert M. Magram, M.D.
George P. McGuire, M.D.
George Montgomery, Jr., M.D.
Earl D. Neslen, M.D.
Richard L. O'Connell, M.D.
Simon A. Sayre, M.D.
Willis Duane Todd, M.D.
Angela-Marie Vedovi, M.D.
Bruce Stacey Waldie, M.D.
Arthur Duane Wilson, M.D.

OPHTHALMOLOGY
(Institute of Ophthalmology)

Director of Service
John H. Dunnington, M.D.

Attending Ophthalmologist and Pathologist
Algernon B. Reese, M.D.

Attending Ophthalmologists
Gordon M. Bruce, M.D.
John P. Macnie, M.D.
Charles A. Perera, M.D.
Raymond L. Pfeiffer, M.D.
Maynard C. Wheeler, M.D.

Associate Attending Ophthalmologists
Raynold N. Berke, M.D.
Howard D. H. Brown, M.D.
LeGrand H. Hardy, M.D.
Willis S. Knighton, M.D.
Ludwig von Sallmann, M.D.

Assistant Attending Ophthalmologists
Frank D. Carroll, M.D.
J. Vincent Flack, M.D.
Frank Payne, M.D.
Osborn P. Perkins, M.D.
**M. Uribe Troncoso, M.D.
Joseph A. C. Wadsworth, M.D.

Assistant Ophthalmologists
C. Gregory Barer, M.D.
Robert R. Chace, M.D.
*Graham Clark, M.D.
Robert McC. Day, M.D.
Andrew deRoetth, Jr., M.D.
Arnold W. Forrest, M.D.
C. Ray Franklin, M.D.
Ira Snow Jones, M.D.
Philip Knapp, M.D.
George R. Merriam, M.D.
Ellen F. Regan, M.D.

Assistant Ophthalmologists
Vanderbilt Clinic
Alfred J. Magee, M.D.
Donald E. Tinkess, M.D.
John T. Worcester, M.D.

Resident
Robert L. Wiggins, M.D.

Assistant Residents
Anthony Donn, M.D.
William G. Everett, M.D.
Floyd H. Farrant, M.D.
Carlos Jose Margarida, M.D.
Daniel W. Mathias, M.D.
Paul B. Sullivan, M.D.
John Michael Leslie Walcott, M.D.
Alexander Gardner Watson, M.D.

ORTHOPEDIC SURGERY
(New York Orthopaedic Dispensary and Hospital)

Director of Service
Alan DeForest Smith, M.D.

Attending Surgeons
Halford Hallock, M.D.
Leonidas A. Lantzounis, M.D.
Harrison L. McLaughlin, M.D.
Frank E. Stinchfield, M.D.

*Leave of Absence
**Inactive

Associate Attending Surgeons

Everett C. Bragg, M.D.
Sawnie R. Gaston, M.D.
Frederick M. Smith, M.D.
William H. Von Lackum, M.D.
Melvin B. Watkins, M.D.

Associate Attending Orthopedic Pathologist

C. Zent Garber, M.D.

Assistant Attending Surgeons

George B. Ambrose, M.D.
Robert E. Carroll, M.D.
Frederick S. Craig, M.D.
Alexander Garcia, M.D.
D. Keith McElroy, M.D.
Charles S. Neer, II, M.D.
Charles T. Ryder, M.D.

Attending Surgeon Vanderbilt Clinic

John C. McCauley, Jr., M.D.

Assistant Attending Surgeons Vanderbilt Clinic

Herman Gladstone, M.D.
**Elliot W. Lawrance, M.D.
Alexander D. Papas, M.D.
Edward M. Wheeler, M.D.
Horace I-sen Yu, M.D.

Annie C. Kane Fellows

Senior Fellow

Maxwell E. Hagedorn, M.D.

Junior Fellows

Fred Houdlett Albee, Jr., M.D.
Charles A. L. Bassett, M.D.
Edward F. Cadman, M.D.
Chien-Min Chen, M.D.
Arthur J. Driscoll, Jr., M.D.
Garry deNeuville Hough, III, M.D.
James B. Jones, M.D.
Afif Z. Nsouli, M.D.
Balu Sankaran, M.D.
Ann B. Whittlesey, M.D.

Assistant Residents

Mariano Cooper, M.D.
Bernard Cooperman, M.D.
Kenneth Coulter Francis, M.D.
Ledford Gerald Gregory, M.D.
Charles C. Hall, M.D.
Thomas F. Hudgins, Jr.,M.D.
Bertram M. Kummel, M.D.
Ralph Lusskin, M.D.
Robert L. Samilson, M.D.
Zbigniew Sobol, M.D.
Max Vechter, M.D.
Daniel McC. Winters, M.D.

*Leave of Absence
**Inactive

OTOLARYNGOLOGY

Director of Service

Edmund P. Fowler, Jr., M.D.

Attending Otolaryngologists

James W. Babcock, M.D.
*George R. Brighton, M.D.
DeGraaf Woodman, M.D.

Associate Attending Otolaryngologists

Franz Altmann, M.D.
Daniel C. Baker, Jr., M.D.
George V. Browne, M.D.

Assistant Attending Otolaryngologists

Edwin B. Bilchick, M.D.
Sylvester Daly, M.D.
*William H. Holden, M.D.
Bela Marquit, M.D.
Jules G. Waltner, M.D.

Assistant Otolaryngologists

Herbert S. Friedman, M.D.
Walter M. Glass, M.D.
Robert M. Hui, M.D.
Albert R. Kolar, M.D.
Paul Lindenberg, M.D.
**Irving W. Voorhees, M.D.
Peter D. Westerhoff, M.D.

Assistant Residents

Paul M. Brunelle, M.D.
Abraham A. Cohen, M.D.
Alfred Dietrich, M.D.
Richard Jerome Freeman, M.D.
Marion Clarence Insley, Jr.,M.D.
Claude Lee Pennington, Jr., M.D.

PATHOLOGY

Director of Service

Harry Pratt Smith, M.D.

Attending Neuropathologist

Abner Wolf, M.D.

Associate Attending Pathologists

Joseph E. Flynn, M.D.
Homer D. Kesten, M.D.

Associate Attending Neuropathologist
David Cowen, M.D.

Assistant Attending Pathologists
Dorothy H. Andersen, M.D.
Robert W. Coon, M.D.
Joseph Seronde, Jr., M.D.
David M. Spain, M.D.
Wellington B. Stewart, M.D.

Assistant Pathologists
Eleanor Roverud, M.D.
Eugene T. Standley, M.D.

Resident
*Donald W. King, M.D.

Assistant Resident
Leonard V. Crowley, M.D.

Interns
S. Raymond Gambino, M.D.
Robert J. Imrie, M.D.
James R. MacLean, M.D.
Vincent Patrick Perna, M.D.

PEDIATRICS
(Babies Hospital)

Director of Service
Rustin McIntosh, M.D.

Attending Pediatricians
Hattie E. Alexander, M.D.
John Caffey, M.D.
Alfred G. Langmann, M.D.

Associate Attending Pediatricians
John M. Brush, M.D.
J. Taylor Howell, Jr., M.D.
William S. Langford, M.D.
**Katherine K. Merritt, M.D.
Charles L. Wood, M.D.

Assistant Attending Pediatricians
John B. Ahouse, M.D.
Harry S. Altman, M.D.
Lilian A. Boker, M.D.
Robert W. Culbert, M.D.
Douglas S. Damrosch, M.D.
Paul A. diSant'Agnese, M.D.
Ruth C. Harris, M.D.
**Charles A. Lang, M.D.
Aildred A. Macdonald, M.D.
Ralph E. Moloshok, M.D.
Conrad M. Riley, M.D.
William A. Silverman, M.D.
Milton Singer, M.D.
Paul S. Strong, M.D.
Agnes G. Wilson, M.D.
Paul E. Wilson, M.D.
James A. Wolff, M.D.

Assistant Pediatricians
William A. Bauman, M.D.
Benjamin C. Berliner, M.D.
Hilde Bruch, M.D.
Harvey Harold Corman, M.D.
Joseph A. Costa, M.D.
Ruth A. Davis, M.D.
Harlow D. Dunton, M.D.
Lavinia G. M. Fox, M.D.
Olga Frankel, M.D.
Alfred M. Freedman, M.D.
Oscar L. Frick, M.D.
Bernard German, M.D.
*Rodman Gilder, Jr., M.D.
Daniel C. Hackett, M.D.
*William E. Homan, M.D.
Martin H. Jacobs, M.D.
Robert E. Jennings, M.D.
Joseph E. Kalbacher, M.D.
Walter R. Kessler, M.D.
John P. Lambert, M.D.
James H. Maroney, M.D.
Daniel Melia, M.D.
Kenneth M. Metcalf, M.D.
Rhoda M. Mickey, M.D.
Walter L. Mitchell, Jr., M.D.
Donald R. Reed, M.D.
Albert P. Rosen, M.D.
Mabel Ross, M.D.
Mary Hyman Samuels, M.D.
W. Russell Smith, M.D.
Raymond Sobel, M.D.
Katherine Sprunt, M.D.
David Stiles, M.D.
Virginia Strong, M.D.
Elizabeth Ufford, M.D.
Frederick H. von Hofe, M.D.
*Robert West, M.D.
Robert C. Wheeler, M.D.
Daniel A. Wilcox, M.D.
Virginia Wilking, M.D.

Assistant Attending Pediatrician
Vanderbilt Clinic
Arthur F. Ackerman, M.D.

Assistant Pediatricians
Vanderbilt Clinic
Alfred L. Abrams, M.D.
Edward P. Duffy, Jr., M.D.

*Leave of Absence
**Inactive

Assistant Pediatricians
Vanderbilt Clinic, Cont.

Elizabeth Glogau Estrin, M.D.
Bertrand Etra, M.D.
Harold T. Fuerst, M.D.
Hyman H. Gordon, M.D.
George W. McCormick, M.D.
Thomas W. Patrick, Jr., M.D.
William H. Smith, M.D.
Hermann Vollmer, M.D.

Resident

Saul Blatman, M.D.

Assistant Residents

Marvin L. A. Auerback, M.D.
Mary L. Bertucio, M.D.
Walter M. Chemris, M.D.
Solomon J. Cohen, M.D.
Adele O. Dellenbaugh, M.D.
Ruth U. Donovan, M.D.
Jack William Garnant, M.D.
Clifford Golden, M.D.
*Robert Arnold Hoekelman, Jr., M.D.
Josephine Miller Kerr, M.D.
Sheldon B. Korones, M.D.
Jerold Francis Lucey, M.D.
Deane Alfred Petersen, M.D.
Peter Robert Scaglione, M.D.
Walter Richard Stankewick, M.D.
Donald K. Stockdale, M.D.
Virginia Van Geyt, M.D.
Beverly G. Wagner, M.D.

PHYSICAL MEDICINE AND REHABILITATION

Director of Service

Robert C. Darling, M.D.

Attending Physician

*William Benham Snow, M.D.

Assistant Attending Physicians

Cassius L. deVictoria, M.D.
A. David Gurewitsch, M.D.
Morton Hoberman, M.D.

Resident

Andreas R. Stadin, M.D.

Clinical Fellows

Milos J. Lota, M.D.
Lucille Tsu, M.D.
Shyh Jong Yue, M.D.

*Leave of Absence

PSYCHIATRY

Acting Director of Service

Irville H. MacKinnon, M.D.

Attending Psychiatrist

Robert B. McGraw, M.D.

Associate Attending Psychiatrists

George E. Daniels, M.D.
William A. Horwitz, M.D.

Assistant Attending Psychiatrists

Lothar Gidro-Frank, M.D.
Kenneth Kelley, M.D.
John A. P. Millet, M.D.

Assistant Psychiatrist

William Leon Sands, M.D.

Associate Attending Psychiatrists
Vanderbilt Clinic

A. Louise Brush, M.D.
Roy D. Craig, M.D.
*Solomon W. Ginsburg, M.D.
Lawson G. Lowrey, M.D.
William A. Schonfeld, M.D.
Edward S. Tauber, M.D.
Mary M. Thomson, M.D.
Adolf Zeckel, M.D.

Assistant Attending Psychiatrists
Vanderbilt Clinic

Edith M. Buyer, M.D.
Robert J. Mearin, M.D.
Alfred Schick. M.D.
Martin Schreiber, M.D.
Sonia S. Stirt, M.D.

Assistant Psychiatrists
Vanderbilt Clinic

Alan B. Adam, M.D.
Andre K. Allen, M.D.
Herbert Boehm, M.D.
Antonio M. Bottino, M.D.
William A. Brooks, M.D.
Elizabeth L. Bryan, M.D.
Ralph J. Carotenuto, M.D.
Hyman Chartock, M.D.
Lilli Cobliner, M.D.
Ralph B. Dawson, M.D.
John A. Frank, M.D.
Martha L. Gassmann, M.D.
George A. Jervis, M.D.
Eva L. Klein, M.D.
Camella A. Losada, M.D.
Hugh McHugh, M.D.
Joost A. M. Meerloo, M.D.

Assistant Psychiatrists
Vanderbilt Clinic, Cont.

Theodore Meltzer, M.D.
Hugh Mullan, M.D.
**Elizabeth Nesbitt, M.D.
John F. Oliven, M.D.
Eda L. Priest, M.D.
David M. Rubin, M.D.
Percy E. Ryberg, M.D.
Leonard Scheinman, M.D.
Jacob Weinless, M.D.

Junior Assistant Psychiatrists
Vanderbilt Clinic

Donald B. Douglas, M.D.
*Seymour C. Post, M.D.
Frederick M. Weissman, M.D.

Psychologist
Vanderbilt Clinic

Zygmunt A. L. Piotrowski, Ph.D.

RADIOLOGY

Director of Service

Ross Golden, M.D.

Chief of Radiotherapy Division and Attending Radiologist

Harold W. Jacox, M.D.

Assistant Attending Radiologist

Juan M. Taveras, M.D.

Assistant Radiologists

Alfred S. Berne, M.D.
R. G. Bjorn Bjornson, M.D.
Francis M. Cummins, M.D.
Catherine J. Dalton, M.D.
Joan Eliasoph, M.D.
Morton M. Kligerman, M.D.
Franklin Reed, Jr., M.D.
Louis A. Rottenberg, M.D.
Gerhart S. Schwarz, M.D.
Josephine Wells, M.D.
Russell Wigh, M.D.

Resident

Robert G. Bogen, M.D.

Assistant Residents

*Alexander D. Crosett, Jr., M.D.
Eleanor M. Dino, M.D.
Kent Ellis, M.D.
Ezekiel Freed, M.D.
Walton Winslow Hamilton, M.D.

*Leave of Absence
**Inactive

David Hayes, M.D.
*Robert Everett Herson, M.D.
Philip M. Johnson, M.D.
Samuel Hyman Madell, M.D.
Joseph M. Moynahan, M.D.
Edward Finch Parsons, M.D.
Anna Silverman, M.D.
Norah du Vernet Tapley, M.D.

Clinical Fellows

Ahmet Rehai Islam, M.D.
Jerome Nadelhaft, M.D.

SURGERY

Director of Service

George H. Humphreys, II, M.D.

Attending Surgeons

Edward J. Donovan, M.D.
Robert H. E. Elliott, Jr., M.D.
Frank L. Meleney, M.D.
Rudolph N. Schullinger, M.D.
Lawrence W. Sloan, M.D.
Jerome P. Webster, M.D.

Associate Attending Surgeons

Arthur H. Blakemore, M.D.
David C. Bull, M.D.
Henry S. F. Cooper, M.D.
Ralph A. Deterling, Jr., M.D.
Robert S. Grinnell, M.D.
Cushman D. Haagensen, M.D.
David V. Habif, M.D.
Harold D. Harvey, M.D.
Edward L. Howes, M.D.
Herbert C. Maier, M.D.
Ferdinand F. McAllister, M.D.
Richmond L. Moore, M.D.
Milton R. Porter, M.D.
Thomas W. Stevenson, Jr., M.D.
Robert H. Wylie, M.D.

Assistant Attending Surgeons

Hugh Auchincloss, Jr., M.D.
Harold G. Barker, M.D.
Con Amore V. Burt, M.D.
*George Francis Crikelair, M.D.
Jose M. Ferrer, Jr., M.D.
*Charles W. Findlay, Jr., M.D.
Edmund N. Goodman, M.D.
Frederic Pratt Herter, M.D.
Robert B. Hiatt, M.D.
Maurice J. Hickey, M.D., D.D.S.
Stanley L. Lane, M.D.
James W. Littler, M.D.
*John F. Prudden, M.D.

Assistant Attending Surgeons, Cont.
Thomas V. Santulli, M.D.
John Scudder, M.D.
Edward B. Self, M.D.
Joseph Arthur Tamerin, M.D.
Philip D. Wiedel, M.D.

Assistant Surgeon
Robin M. Rankow, M.D.

Assistant Attending Surgeons
Vanderbilt Clinic
Charles H. C. Beakes, M.D.
Grant Sanger, M.D.
Gordon McK. Stevenson, M.D.

Assistant Surgeons
Vanderbilt Clinic
Morris R. Bradner, Jr., M.D.
James R. Breed, M.D.
Ben Marr Lanman, M.D.
Stephen H. M. Plum, M.D.
D. Barton Stevens, M.D.
Earl S. Taylor, M.D.
Alfred D. Young, M.D.

Attending Surgical Pathologists
Virginia Kneeland Frantz, M.D.
Raffaele Lattes, M.D.

Assistant Surgical Pathologist
Nathan Lane, M.D.

Residents
James A. Bougas, M.D.
Hugh F. Fitzpatrick, M.D.
Alfred Jaretzki, III, M.D.
William G. Larsen, M.D.
Samuel R. Powers, Jr., M.D.
Alfredo B. Rehbein, M.D.
Edgar A. Storli, M.D.
Lester L. Vargas, M.D.
Arthur B. Voorhees, Jr., M.D.

Assistant Residents
Arthur Harold Aufses, Jr., M.D.
Walter Ballinger, M.D.
Richard C. Britton, M.D.
Carl R. Feind, M.D.
*Glendon C. Fraser, M.D.
C. Herbert Fredell, M.D.
Don O. Gore, M.D.
Robert W. Holliday, M.D.
Julius H. Jacobson, M.D.
Sheldon M. Levin, M.D.
James R. Malm, M.D.
Roy L. McKittrick, M.D
Orville J. Mirehouse, M.D.
Frederick R. Randall, M.D.
James Beall Rodgers, M.D.
Hubert L. Rosomoff, M.D.
Daniel M. Shapiro, M.D.
Albert Starr, M.D.
Peter Weil, M.D.
John Marion Wilson, Jr., M.D.

*Leave of Absence

Interns
Louis Del Guercio, M.D.
Stanley Edelman, M.D.
Gardner F. Fay, M.D.
Norman A. Hill,, M.D.
Cyrus Houshmand, M.D.
LeRoy W. McDaniel, M.D.
Warner Nash, M.D.
Ronald R. Pfister, M.D.
Dominick Paul Purpura, M.D.
James Courtland Robinson, M.D.
Robert J. Rubin, M.D.
John C. Williams, Jr., M.D.

Resident
Thoracic Surgery
Walter A. Wichern, Jr., M.D.

Residents
Plastic Surgery
Vahram Yeghia Bakamjian, M.D.
Claude C. Coleman, Jr., M.D.

Assistant Resident
Plastic Surgery
Albert Rigau, M.D.

Residents
Surgical Pathology
Sidney Z. Gellman, M.D.
Fritz M. Liebmann, M.D.
Robert Reiff Williams, M.D.

UROLOGY
(J. Bentley Squier Urological Clinic)

Director of Service
George F. Cahill, M.D.

Attending Urologist
George W. Fish, M.D.

Assistant Attending Urologists
Charles T. Hazzard, M.D.
John N. Robinson, M.D.

Assistant Urologists
Stanley B. Braham, M.D.
Alex Finkle, M.D.
Leonard A. Hallock, M.D.
Perry B. Hudson, M.D.

Assistant Urologists, Cont.
John K. Lattimer, M.D.
Meyer M. Melicow, M.D.
Reginald F. Seidel, M.D.
Thomas J. Sullivan, M.D.
Ralph J. Veenema, M.D.
Ralph C. Yeaw, M.D.

Assistant Urologists
Vanderbilt Clinic
Frederick S. Dick, M.D.
Robert Kollmar, M.D.
Stanford Pulrang, M.D.
Arthur T. Willetts, M.D.

Resident
Jack M. Waldrep, M.D.

Assistant Residents
Archie L. Dean, M.D.
John Timothy Donovan, M.D.
Edward Thomas Rafferty, M.D.
Leonard J. Sullivan, M.D.
Aurelio Calvo Uson, M.D.

VANDERBILT CLINIC

CHIEFS OF CLINICS

Herman Schwartz, M.D., *Anesthesiology*
J. Lowry Miller, M.D., *Dermatology*
Albert R. Lamb, Jr., M.D., *Medicine (Group Clinic)*
Daniel Sciarra, M.D., *Neurology*
Joseph Ransohoff, M.D., *Neurological Surgery*
Charles L. Buxton, M.D., *Obstetrics and Gynecology*
Maynard C. Wheeler, M.D., *Ophthalmology*
Halford Hallock, M.D., *Orthopedic Surgery*
Edwin B. Bilchick, M.D., *Otolaryngology*
William A. Bauman, M.D., *Pediatrics*
Morton Hoberman, M.D., *Physical Medicine and Rehabilitation*
Robert B. McGraw, M.D., *Psychiatry*
Thomas V. Santulli, M.D., *Surgery*
Charles T. Hazzard, M.D., *Urology*

Appendix

APPENDIX

Statistics

BED COMPLEMENT, DECEMBER 31, 1953

	No. Beds	
PRIVATE:		
Presbyterian Hospital	186	
Babies Hospital	9	
Eye Institute	19	
Neurological Institute	48	
Sloane Hospital	34	
Total Private		296
SEMI-PRIVATE:		
Presbyterian Hospital and Sloane Hospital:		
All Services	97	
Medicine	16	
Surgery	14	
Urology	31	
Orthopedic	28	
Ear, Nose and Throat	9	
Gynecology	13	
Obstetrics	29	
Babies Hospital	30	
Eye Institute	28	
Neurological Institute	39	
Total Semi-Private		334
WARD:		
Presbyterian Hospital and Sloane Hospital:		
Medicine	116	
Surgery	114	
Urology	36	
Orthopedic	95	
Ear, Nose and Throat	24	
Admitting	14	
Gynecology	35	
Obstetrics	81	
Babies Hospital (including premature nursery of 23 incubators)	152	
Eye Institute	45	
Neurological Institute	124	
Total Ward		836
		1,466
MARY HARKNESS CONVALESCENT HOME		57
		1,523
NEWBORNS (Sloane Hospital)		130
Total		1,653

HOSPITAL ADMISSIONS

	Admissions	
	1953	*1952*
PRIVATE:		
Presbyterian Hospital	4,777	5,469
Babies Hospital	370	405
Eye Institute	450	458
Neurological Institute	853	890
Sloane Hospital	967	888
Total Private	7,417	8,110
SEMI-PRIVATE:		
Presbyterian Hospital and Sloane Hospital:		
All Services	2,982	2,171
Medicine	236	221
Surgery	330	278
Urology	590	532
Orthopedic	584	489
Ear, Nose and Throat	701	686
Gynecology	594	508
Obstetrics	1,080	1,072
Babies Hospital	1,381	1,240
Eye Institute	1,125	967
Neurological Institute	926	833
Total Semi-Private	10,529	8,997
WARD:		
Presbyterian Hospital and Sloane Hospital:		
Medicine	1,754	1,696
Surgery	1,876	1,683
Urology	613	640
Orthopedic	1,253	1,256
Ear, Nose and Throat	893	882
Admitting	1,482	1,654
Gynecology	902	892
Obstetrics	3,252	3,211
Babies Hospital	2,825	2,606
Eye Institute	1,153	1,141
Neurological Institute	1,836	1,816
Total Ward	17,839	17,477
MARY HARKNESS CONVALESCENT HOME	708	567
Total	36,493	35,151
INFANTS BORN IN SLOANE HOSPITAL:		
Private beds	571	572
Semi-private and ward beds	3,186	3,065
Total	3,757	3,637

HOSPITAL OCCUPANCY

	Patient Days Care		Percentage of Occupancy	
	1953	1952	1953	1952
PRIVATE:				
Presbyterian Hospital	61,446	62,895	90.5	78.8
Babies Hospital	1,527	1,737	46.5	52.7
Eye Institute	4,704	5,145	67.8	74.0
Neurological Institute	14,717	12,713	84.0	72.4
Sloane Hospital	8,393	7,488	67.6	60.2
Total Private	90,787	89,978	84.0	75.0
SEMI-PRIVATE:				
Presbyterian Hospital and Sloane Hospital:				
All Services	26,803	21,236	75.7	89.3
Medicine	5,459	5,444	93.5	93.0
Surgery	4,611	4,459	90.2	87.0
Urology	6,972	5,988	61.6	52.8
Orthopedic	8,082	7,335	79.1	71.6
Ear, Nose and Throat	3,345	2,835	101.8	86.1
Gynecology	5,468	4,926	115.2	103.5
Obstetrics	8,125	8,120	76.8	76.5
Babies Hospital	8,605	8,303	78.6	75.6
Eye Institute	7,548	7,630	73.9	74.5
Neurological Institute	14,861	13,314	104.4	93.3
Total Semi-Private	99,879	89,590	81.9	81.1
WARD:				
Presbyterian Hospital and Sloane Hospital:				
Medicine	38,508	39,368	90.9	92.7
Surgery	33,986	35,126	81.7	84.2
Urology	11,528	12,463	87.7	94.6
Orthopedic	29,260	29,751	84.4	85.6
Ear, Nose and Throat	5,591	4,915	63.8	56.0
Admitting	2,731	3,127	53.4	61.0
Gynecology	12,247	12,047	95.9	94.0
Obstetrics	23,318	24,673	78.9	83.2
Babies Hospital	39,884	40,703	71.9	72.8
Eye Institute	10,159	11,360	61.9	69.0
Neurological Institute	36,746	37,319	81.2	82.8
Total Ward	243,958	250,852	79.9	82.0
MARY HARKNESS CONVALESCENT HOME	15,632	9,787	75.1	51.2
Total	450,256	440,207	81.0	79.2
INFANTS BORN IN SLOANE HOSPITAL:				
Private beds	4,743	4,729	32.5	32.3
Semi-private and Ward beds	22,843	23,546	69.5	71.5
Total	27,586	28,275	58.1	59.4

OUT-PATIENT DEPARTMENT STATISTICS

	1953	1952
Summary of Patients Treated:		
Number of patients treated	52,144	46,393
Number of vists:		
Free	102,744	101,792
Pay	282,649	284,484
Total	385,393	386,276
Average visits per working day	1,412	1,407

	New to Clinics	*Revisits*	*Total Visits*
Attendance Statistics:			
Dermatology	6,382	29,114	35,496
Emergency and Admitting Wards	15,040	368	15,408
Group Clinic	4,281	19,772	24,053
Medicine	15,916	35,637	51,553
Neurology	2,208	13,173	15,381
Obstetrics and Gynecology	5,627	34,490	40,117
Occupational Therapy	91	1,276	1,367
Ophthalmology	4,606	23,974	28,580
Orthopedic	6,848	30,848	37,696
Otolaryngology	2,926	13,703	16,629
Pediatrics	5,442	36,774	42,216
Physical Therapy	1,633	16,468	18,101
Psychiatry	329	5,108	5,437
Surgery	15,685	28,857	44,542
Urology	1,358	7,459	8,817
Total	88,372	297,021	385,393

PERSONNEL STATISTICS

	On Duty December 31	
	1953	*1952*
Administration	16	13
Assistant Secretary-Treasurer	43	41
Comptroller	87	88
Public Interest	11	10
Convalescent Home	44	33
Non-Professional Services:		
Buildings and Grounds	563	563
Food Service	366	367
Personnel and Protective	67	64
Other Non-Professional Services	184	171
Professional Services:		
Nursing	1,177	1,104
Prof. Staff, Doctors' Offices and Research	368	353
Vanderbilt Clinic and Ancillary Services	616	598
Total	3,542	3,405
Student Nurses and Student Dietitians	447	482
Volunteer Workers	289	249

THE ALUMNAE ASSOCIATION OF THE SCHOOL OF NURSING OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK, INC.

BALANCE SHEET, DECEMBER 31, 1953 AND 1952

ASSETS

	1953	*1952*
Capital Funds—securities and cash	$505,969.73	$491,499.39
Operating Funds—securities, cash, etc.	11,243.54	17,818.45
Total Assets	$517,213.27	$509,317.84

LIABILITIES

Capital Fund Reserves:		
General fund	$ 15,480.70	$ 15,497.38
Benefit fund	134,710.62	128,749.39
Pension fund	310,037.01	305,966.73
Emma B. Kennedy Scholarship fund	23,163.97	22,187.91
Memorial Scholarship fund, '20	2,267.87	2,170.20
Helen Young Scholarship fund	18,410.09	16,427.78
Richard William Walsh Scholarship fund	1,199.47	500.00
Ruth C. Williams Scholarship fund	700.00	
Total capital fund reserves	$505,969.73	$491,499.39
Operating Fund Reserves	$ 11,243.54	$ 17,818.45
Total Liabilities	$517,213.27	$509,317.84

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS

Cash on hand January 1	$ 7,034.15	$ 4,537.19
Receipts:		
Sale of securities	20,890.42	17,513.22
Investment income	23,310.94	22,526.64
Royalties and proceeds from sale of books		1,145.49
Donations	8,103.70	8,350.53
Dues and initiation fees	8,662.33	8,470.88
Dinner to graduating class	438.00	550.00
Loans repaid, etc	1,150.77	409.40
Total Receipts	$ 62,556.16	$ 58,966.16
	$ 69,590.31	$ 63,503.35
Disbursements:		
Purchase of securities	$ 29,040.43	$ 27,025.40
Clerical expense and fees	4,522.75	1,802.00
Pensions and benefits paid	13,520.00	13,745.00
Scholarships granted	3,208.33	2,933.33
Loans granted	200.00	200.00
Donations	300.00	300.00
Printing, stationery and postage	5,945.09	6,487.02
Entertainment of graduating class	2,238.49	2,120.79
Miscellaneous	3,305.99	1,855.66
Total Disbursements	$ 62,281.08	$ 56,469.20
Cash on hand December 31	$ 7,309.23	$ 7,034.15

HELEN YOUNG,
Treasurer

BABIES HOSPITAL BOARD OF WOMEN MANAGERS

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1953 AND 1952

	1953	*1952*
Balance, January 1	$ 1,332.52*	$ 187.44
Receipts:		
Membership dues	$ 230.00	$ 250.00
United Hospital Fund	4,681.87	4,970.05
Greater New York Fund	5,977.01	5,275.79
Total Receipts	$10,888.88	$10,495.84
	$ 9,556.36	$10,683.28
Disbursements:		
To Babies Hospital for:		
Emergency Nursing	$ 2,916.66	$ 3,500.00
Pediatric Psychiatric Clinic	1,500.00	1,500.00
Recreational Therapy	4,500.00	4,500.00
Fund for Cleft Palate Cases	334.95	1,000.00
Decorations, furniture and equipment	281.35	1,502.00
Miscellaneous	23.40	13.80
Total Disbursements	$ 9,556.36	$12,015.80
Balance, December 31	$ NONE	$ 1,332.52*

JULIA M. THIEROT,
Treasurer

* Overexpended

BABIES HOSPITAL

CRIBSIDE SOCIAL SERVICE COMMITTEE

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1953 AND 1952

	1953	*1952*
Balance, January 1	$ 490.32	$ 1,419.51
Receipts:		
Membership dues	$ 150.00	$ 135.00
Donations	384.20	160.00
United Hospital Fund	6,567.63	6,971.87
Greater New York Fund	8,384.41	7,400.76
Investment income	572.43	589.13
Nearly New Shop	752.25	850.39
Sewing Class dues and receipts	521.52	638.58
Repayments by patients of advances and loans	1,137.01	1,520.27
Total Receipts	$18,469.45	$18,266.00
	$18,959.77	$19,685.51
Disbursements:		
Social service salaries	$16,163.22	$13,935.32
Travel of social service staff	84.18	103.21
Conference expenses, dues, subscriptions and meetings	263.73	273.91
Convalescent care	983.29	1,394.73
Advances to patients for convalescent care and miscellaneous loans	1,137.01	1,520.27
Relief assistance and extra for patients:		
Clothing	771.32	755.15
Milk and food	476.61	622.86
Christmas and Thanksgiving	227.18	329.48
Other	190.99	107.10
Miscellaneous	395.19	153.16
Total Disbursements	$20,692.72	$19,195.19
Balance, December 31	$ 1,732.95*	$ 490.32

DOROTHY MILLS,
Treasurer

* Overexpended

THE NEUROLOGICAL INSTITUTE AUXILIARY OF THE BOARD OF TRUSTEES OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1953 AND 1952

	1953	*1952*
Balance, January 1	$10,333.58	$ 638.30
Receipts:		
Donations	$ 2,178.00	$ 1,707.00
United Hospital Fund	10,111.54	10,733.91
Greater New York Fund	12,908.68	11,394.25
Everybody's Thrift Shop	6,111.84	7,641.46
Repayments by patients of advances and loans	1,376.70	952.20
Total Receipts	$32,686.76	$32,428.82
	$43,020.34	$33,067.12
Disbursements:		
Social Service salaries	$16,664.57	$17,940.96
To Neurological Institute for Library	100.00	100.00
Advances to patients for summer therapeutic care and miscellaneous	1,376.70	952.20
Summer therapeutic care	1,449.42	1,333.16
Chronic care	315.06	606.00
Medical relief	1,259.02	790.81
Recreation of patients	155.00	48.15
Staff travel, field and conference	127.79	273.49
Miscellaneous, postage, telephone and publications	391.84	688.77
Total Disbursements	$21,839.40	$22,733.54
Balance, December 31	$21,180.94	$10,333.58

Helen Hoyt Stookey,
Chairman

WOMEN'S AUXILIARY OF THE BOARD OF TRUSTEES OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1953 AND 1952

	1953	*1952*
Balance, January 1	$ 7,175.84	$ 4,572.43
Receipts:		
Membership dues	$ 585.00	$ 567.50
United Hospital Fund	6,372.55	6,764.78
Greater New York Fund	3,135.37	7,180.95
Donations	55.00	1,125.45
Everybody's Thrift Shop	4,778.87	5,952.03
Stuyvesant Square Thrift Shop	970.80	
Fashion show		884.40
Total Receipts	$20,897.59	$22,475.11
	$28,073.43	$27,047.54
Disbursements:		
To Presbyterian Hospital for:		
Occupational Therapy	$ 7,500.00	$12,000.00
Library	2,400.00	2,700.00
Volunteer Service	3,612.73	5,000.00
Residents' Loan Fund	6,000.00	
Miscellaneous	628.37	171.70
Total Disbursements	$20,141.10	$19,871.70
Balance, December 31	$ 7,932.33	$ 7,175.84

AUDREY B. SCHULLINGER,
Treasurer

ENDOWED BEDS

(1) A gift of $10,000 shall entitle the donor to nominate a patient to use and occupy one bed in the common wards of the Hospital free of charge (except for special service) for not more than ninety days in any one year.

The donor may at the time of making the gift appoint to another in his stead such right to nominate, provided the appointee is acceptable to the Hospital.

Such right to nominate may be exercised only:—

(*a*) During the life of the person having the right to nominate, if such right is in an individual.

(*b*) For a period of fifteen years, if such right is in a Corporation, Society or Association.

(2) Endowed Bed privileges are subject to all rules and regulations governing the admission, treatment, and discharge of patients.

(3) The Board of Trustees may in their discretion under special circumstances accept gifts for the endowment of beds on such other terms and conditions as they may deem best calculated to promote the objects for which the Hospital was established and is maintained.

Memorial Endowed Beds for Research Purposes

A gift of $10,000 shall entitle the donor to establish as a permanent memorial one memorial endowed bed for research purposes in a ward of the Hospital to be used and occupied by patients free of charge, except for special service.

ENDOWED BEDS AND ROOMS

Presbyterian Hospital

1868 Mary J. Gelston
1870 Henrietta A. Lenox (2 Beds)
Washington R. Vermilyea
A. R. Wetmore
1871 John Laurie
Mary Ann Parish
1872 William Earl Dodge
John T. Johnston
Otis D. Swan
Henry Young (2 Beds)
1873 James Brown (2 Beds)
John R. Ford
Jonathan Sturges
1878 James G. and Henry G. deForest, in memory of Lockwood deForest Woodruff, M.D.
1880 William C. Rhinelander
1881 Jennet L. and Robert L. Belknap, in memory of Aaron B. Belknap
Fifth Avenue Presbyterian Church
Henry B. Hyde, in memory of his son, Henry B. Hyde, Jr.
John Stewart Kennedy
Frederick and Henry G. Marquand
Edwin D. Morgan (3 Beds)
Mary L. Sheafe
John L. Proudfit

1882 Heber R. Bishop (3 Beds)
Mrs. Robert L. Stuart, in memory of her father, Robert McCrea
Edwin D. Morgan
Mrs. Moses Taylor
1883 Frederick Billings
Reformed Protestant Dutch Church of the City of New York
1884 Nathaniel W. Conkling
West Presbyterian Church, to be known as "Faith Presbyterian Church Bed"
Madison Square Presbyterian Chuch, in memory of George W. Lane
1885 Brick Presbyterian Church, in memory of Dr. John G. Adams
Richard Irvin
1886 Frederick Baker, in memory of Sarah Pyewell Baker
Edward L. Beadle
Brick Presbyterian Church, in memory of Miss Ann Adams
Peter Cumming, in memory of Francis P. Schoals
George E. Dodge
Horace F. Hutchinson, in memory of Ellen B. Schoals
Mr. and Mrs. William D. Sloane, in memory of their son, William D. Sloane, Jr.
Henry S. Wilson, in memory of his son, Harry H. Wilson
1887 Fifth Avenue Presbyterian Church
1888 Broadway Tabernacle Society
Samuel Inslee, in memory of Kate J. Inslee
1889 John Sloane, in memory of his mother, Euphemia Sloane
1890 Isaac V. Brokaw, in memory of Ernest B. Brokaw
Sidney Dillon, in memory of Hannah Dillon
Ambrose K. Ely
Josiah M. Fiske
O. B. Jennings
Mrs. John Stewart Kennedy
Amelia Kerr
Robert Marshall
Elizabeth S. and Emily M. Wheeler, in memory of James Boorman
"The Davenport Bed"
1891 Sarah A. Havemeyer, in memory of her son, Hector C. Havemeyer
Thomas Hope
John E. Parsons, in memory of his children, E. L. P., K. M. P., and R. M. P.
Mrs. A. R. Van Nest, in memory of her husband, Abram R. Van Nest
1892 John Stewart Kennedy, in memory of his niece, Emma Stewart Baker
Alexander Maitland, in memory of his mother, Mary C. Maitland
1893 Maria S. Auchincloss, in memory of her husband, Edgar S. Auchincloss
Frances T. Lord, in memory of her husband, George deForest Lord
Presbyterian Church on University Place
Presbyterian Home for Aged Women
Margaret A. Sinclair, in memory of Mr. and Mrs. James Sinclair
West-Park Presbyterian Church
Young Men's Christian Association
1895 Mary Harrison
Mrs. Clarence M. Hyde, in memory of her mother, Rebecca Babbitt
John Stewart Kennedy, in memory of Mrs. Robert L. Stewart
Mrs. James T. Murray, in memory of her husband, James T. Murray
1896 Anthony Dey, in memory of Joseph G. and Eliza D. Scott
Jane Hope
Esther J. Jennings, in memory of her husband, Oliver B. Jennings
1897 Mrs. Francis E. Baker, in memory of her father, James Rich Steers
William S. Brown
Helen Miller Gould, in memory of her parents, Mr. and Mrs. Jay Gould
Margarette E. and Susan D. Griffith, in memory of their father, Griffith W. Griffith
Mary J. Griffith, in memory of her husband, Griffith W. Griffith
Rachel L. Kennedy, in memory of her mother, Mrs. Rachel C. Kennedy

Annie S. Paton, in memory of her husband, William Paton
Charlotte H. Skidmore, to be known as "The William L. Skidmore Bed"
1898 Brick Presbyterian Church
Matilda A. Brown, in memory of her son, H. Auchincloss Brown
First Presbyterian Church
Mrs. Stephen V. Harkness, in memory of her daughter, Florence Harkness
Jane Hope, in memory of her mother, Grace Corrie Hope
John Stewart Kennedy, in memory of Rev. William G. Schauffler, D.D., L.L.D.
Mrs. Elliott F. Shepard, in memory of her daughter, Florence Vanderbilt Shepard
Mrs. Elliott F. Shepard, in memory of her daughter, Marguerite Shepard
1899 William W. Cole, in memory of his mother, Mary A. Cole
William Whitewright, in memory of his father, William Whitewright, "The Whitewright Beds" (10 Beds)
1900 Emily B. Hopkins, in memory of her husband, Moses Hopkins, "Moses Hopkins Memorial"
Donald MacKay, in memory of his children, Edith Winslow and Walter Wise MacKay
Caroline L. Macy, in memory of her daughter, Mary M. K. Willets
Laura Roome, in memory of her sons, Harry and Alfred Roome
Martha L. St. John, in memory of her mother, Sarah Ward
Nathaniel Whitman
1901 Julia Billings, in memory of her husband, Frederick Billings
Camilla L. Edwards, in memory of her husband, Walter Edwards
Andrew J. Garvey, in memory of his mother, Elizabeth Jeffries Garvey (2 beds)
George Lauder
Charles H. Marshall
Justine Adele Stafford, in memory of her father, Justin A. Bliss
1902 Robert Graham Dun
Margaret J. Plant, in memory of her brother, Simon Loughman
1903 Heber R. Bishop
Lura Currier
Mrs. Francis B. Harrison
Julia J. MacCartee, in memory of her husband, Robert MacCartee
Madison Avenue Reformed Church
Adela Berry Sloane, in memory of her father, Abraham J. Berry, M.D.
Justine Adele Stafford, in memory of her mother, Eveline C. Bliss
John T. Terry
1904 Virginia E. Fowler, in memory of Clarence E. Fowler
Susan Bevier
Mrs. William Starr Miller
Josephine Penfold, in memory of Dr. Edward Livingston Trudeau, Jr.
Peter Reid, in memory of his wife, Jane Watson Reid
Francis A. Palmer
1905 Frederick G. Bourne
Helen C. Inslee, in memory of her husband, Samuel Inslee
Titus B. Meigs, in memory of his son, Titus B. Meigs, Jr.
Mrs. James T. Murray, in memory of Rev. John Hall, D.D., L.L.D.
Sarah J. Parsons, in memory of her husband, Charles Parsons
Presbyterian Church on University Place
1906 Maria L. Campbell, in memory of Henry Pearsall Campbell
Susan W. Duncan, in memory of her husband, John P. Duncan
Samuel Keyser (3 beds)
Sara Pyle McAlpin and James Tolman Pyle, in memory of their father, William Scott Pyle
Reformed Protestant Dutch Church of Garden Street
John Sloane, in memory of his brother, Thomas Chalmers Sloane
Joan Sloane, in memory of his father, William Sloane
1908 William R. Craig, in memory of his sister, Florence Faxon Craig
George B. Goldschmidt, in memory of his mother, Celestine Goldschmidt
Samuel Anthony Goldschmidt, in memory of his mother, Celestine Goldschmidt

Mrs. Stephen V. Harkness, in memory of her husband, Stephen V. Harkness
Charles H. Marshall, Jr.

1909 Rev. and Mrs. Robert Russell Booth, in memory of "Minnie and Willie"
Canadian Society of New York
Edward West Currier, in memory of his stepmother, Laura Currier
Edward West Currier, in memory of his stepbrother, Walter B. Currier
Edward West Currier, in memory of Edward W. Currier
Mary Jane Johnson, in memory of her husband, William H. Johnson
J. Theresa Keyser, in memory of her husband, Samuel Keyser
Julia Hannon Lyle
Winfield Tucker, in memory of Joseph, Isabelle and Adeline (3 beds)
J. Spencer Turner, in memory of his first wife, Cornelia J. Turner

1910 Jane A. Townsend, in memory of her son, Randolph W. Townsend, Jr.
Jane A. Townsend, in memory of her son, Harmon W. Norton
Jane A. Townsend, in memory of her daughter, Emma L. Norton
Amelia Mott Graham, in memory of Malcolm Graham
Adeline Ives Latham, in memory of her husband, John Howard Latham
Josephine G. Lord, in memory of her husband, Franklin B. Lord

1911 Brearley School Girls and others interested, in memory of Madam Bertha Beck, "Madam Beck Memorial Teacher's Bed"
Harriet Coles, in memory of her sisters, Susan and Anna Codman
Caroline Thorn Kissel, in memory of her husband, Gustav Edward Kissel
Katherine Spencer Leavitt, in memory of her husband, Rev. William Leavitt (2 beds)
Reformed Low Dutch Church of Harlem
Frederick Sturges, in memory of his father, Jonathan Sturges
William Stuart Tod, in memory of his brother, George Tod

1912 Melville de Wolf, in Children's Ward, "Emma de Wolf Bed"
Gustavia A. Senff, in memory of her husband, Charles A. Senff

1913 Mrs. Christopher M. Bell, "The Dennistoun Bed"
Cornelia Eaton, to be known as "The Dr. Reuben S. Carpentier Memorial" (3 beds)
Mrs. Jeremiah V. Meserole, in memory of her son, Abraham Meserole
Josephine Penfold
Jane G. Phelps, in memory of her husband, Anson G. Phelps, Jr. (2 beds)

1914 Hugh D. Auchincloss, in memory of his mother, Elizabeth Auchincloss
Jane Elizabeth Grannis, in memory of her mother, "Charlotte Williams Platt Bed"
William H. Penfold, in memory of Josephine Penfold
Louise Tillinghast, in memory of her sister, Amelia C. Babcock
Minnie Hackett Trowbridge (6 beds)

1915 A Friend, in memory of Sophia Kellogg Stebbins and Mary Tompkins Kimball
A Friend
Mrs. Jeremiah V. Meserole, in memory of her father-in-law, Abraham Meserole
Mrs. Jeremiah V. Meserole, in memory of her husband, Jeremiah Vanderhilt Meserole
Mrs. Jeremiah V. Meserole, in memory of her brother, Adolphus Clock
Mrs. Jeremiah V. Meserole, in memory of her parents, Alfred and Anna Maria Clock

1916 Emil C. Bondy, in memory of Margaret Carson Cowan
Central Presbyterian Church
Mr. and Mrs. James Petrie Chalmers, in memory of James Petrie Chalmers, Jr. "Chalmers Memorial Bed"
Robert A. Chambers, in memory of his father, Robert Chambers
Dunlevy Milbank, in memory of his mother, Ella Dunlevy Milbank
William D. Sloane (3 beds)

1917 Emeline Y. Danforth, in memory of Mrs. William B. Jenkins
Harris Brisbane Dick, to be known as the "Harris Brisbane Dick Free Bed"
Sarah C. Miller
Albert Winter, in memory of Adaline Benson Winter

1918 Ida Leora Olmstead, to be known as "Leora McCammon Bed"

1919 Samuel Elliott
Elizabeth Keys, in memory of her daughter, Edith Keys
Rutgers Presbyterian Church
James R. Steers, in memory of his former wife, Rebecca E. Steers
John W. Sterling
1920 William C. Boschen, to be known as the "Boschen Bed"
Rosa Franklin (4 beds)
Francis P. Furnald
Mrs. Francis P. Furnald
Mary A. Harriot, to be known as the "Margaret Harriot Alms"
Mary A. Harriot, to be known as the "James Harriot Alms"
Mrs. Henry O. Havemeyer, in memory of her parents, George William and Matilda Adelaide Elder
Margaret J. Orr, in memory of her mother, Ann Boyd Orr
Anna St. John, in memory of her brother, Milton St. John
1921 Mrs. Peter B. Wyckoff, to be known as the "Sidney Dillon Bed"
Henry M. Gescheidt
Ralph E. Prime, in memory of his daughter, Ruth Havens Prime
Joseph K. Gwynn
Charles S. Ward, in memory of his friend, Sophie L. Kinman
Charles S. Ward
1922 Minetta C. Howenstine (8 beds)
Christina C. Munro, in memory of her husband, John Munro
Anna M. Romaine, in memory of Dr. William I. Detmold
Arnold Thayer (2 beds)
Hamilton B. Tompkins, in memory of his wife and himself
1923 Lydia Augusta Brown
Josephine Newman Hall
1924 Bohemian Society "Lidumil"
Cordelia F. Turrell
Nannie Gyles Johnson (Children's Ward), in memory of her son, Shirley Everton Johnson
Mrs. William John Fitzgerald
1925 Christina Bond
In memory of Julia C. Skidmore
George Clarke
Elizaheth J. Hofer (2 beds)
In memory of Catherine Parke and Horatio C. Kretchmar
Edward M. Morgan Memorial Association (4 Beds)
In memory of Edward M. Morgan
Jennette Robertson, to he known as "Helen C. Inslee Endowed Bed"
1926 Elizaheth Ellen Auchincloss, to be known as "E. E. Auchincloss, Jr. Bed"
Memhers of the New York Stock Exchange, to be known as the Seymour LeGrande Cromwell Memorial (2 Beds)
Edmund Penfold (2 Beds), in memory of Josephine Penfold and William Hall Penfold
Dr. M. Allen Starr, in memory of Allen Eghert Starr
John B. Trevor, in memory of Emily N. Trevor
West End Collegiate Church
George D. Widener
1927 Second Presbyterian Church in the City of New York
Ellen Mills Borne, in the Children's Ward, two beds to be known as "John E. Borne Bed" and "Nellie M. Borne Bed"
Virginia Marquand Monroe, in the name of the Young Men's Christian Association
Mrs. Charles H. Senff, to be known as "Dr. George A. Tuttle Bed"
W. Frazer Gihson. in memory of his mother, Jeanette Frazer Gihson, to be known as "Jeanette Frazer Gihson Bed"
Augustus C. Gurnee, two beds in memory of his mother, Mary M. Gurnee
Eliza V. Nicholson

Mrs. Murray W. Dodge and Mrs. Franklin Lord, in memory of their mother, Mrs. Fordyce D. Barker (Single Ward Room)
Dunlevy Milbank (Single Ward Room)
F. Ethel Wickham, in memory of her father, William Hull Wickham, to be known as "William Hull Wickham Bed" (Single Ward Room)
Anna A. Johnston, in memory of her parents, William G. and Adriana C. Gardner
Anna A. Johnston, in memory of Lewis, Anna, Edward and Mary Johnston (Single Ward Room)
Broadway Presbyterian Church, to be known as the "Walter Duncan Buchanan Bed"

1928 North Presbyterian Church
In memory of McKevers Bayard Brown (Single Ward Room)
Caroline B. Sellew (4 Beds)
Red Cross Rooms for Nurses (3 Single Ward Rooms)
Robert W. deForest (Single Ward Room)
Henry W. deForest (Single Ward Room)
James R. Steers
Jane Livingston Armour, in memory of John A. Livingston
Jane Livingston Armour, in memory of Herman O. Armour
In memory of Meredith Howland Pyne
Stella C. and Roi C. Megrue (Single Ward Room)
Mrs. E. C. Wills, in memory of her mother, Mrs. J. F. Ackerman, and her sister, Mrs. W. Clarence Reed

1929 Caroline White, in memory of her sister, Eliza W. White
Elizabeth A. Hays, in memory of William and Charlotta Hays

1930 Mr. and Mrs. Ernest Trow Carter
The Presbyterian Church in the Town of Rye, N. Y.
Mrs. Arthur E. Lauderbach, in memory of her mother and father, Esther Hull Jackson and Peter A. H. Jackson
Mary L. Walker Peters, to be known as "The Charles Grenville Peters and Mary Walker Peters Free Bed"
Marie F. Coddington, to be known as "The Emilie Coddington Bed"

1931 Mrs. Clara Beales Obrig, in memory of Adolph Obrig and Clara Beales Obrig (Single Ward Room)
Alfred V. Meserole, in memory of his mother, Evelina A. Meserole

1932 In loving memory of Justine Adele Stafford (Mrs. W. F. Stafford) by her sister, Ida Evelina Bliss

1933 Mrs. John A. Hance and Mrs. Irene Louise Hance, in memory of James R. Jesup

1934 Ida Adams, in memory of her sister, Sadie E. and her brother, Robert F. Adams (Single Ward Room)
Josephine Leypoldt, in memory of her brothers, Louis and Frederick Leypoldt (2 Beds)

1935 Walter J. M. Donovan, in memory of his father, Timothy Donovan

1936 Elizabeth P. Hewes, to be known as "The Elizabeth P. Hewes Bed"
Dunlevy Milbank, in memory of his mother, Ella Dunlevy Milbank
Mary S. Thayer, to be known as "The Orlando Thayer Bed"

1937 Margaretta J. Gamble, to be known as "The Gamble Bed," in memory of her father and mother
Jeremiah Milbank, in memory of his father, the late Joseph Milbank

1938 Susetta L. Goss, to be known as "The Goss Bed," in memory of her parents, Rev. C. C. Goss and Theodosia C. Goss
Annie Miller, to be known as "The Mrs. Alexander Miller Memorial Bed," in memory of her mother, Mrs. Alexander Miller
Bertha H. Minturn, in memory of her most faithful and beloved nurse, Mary Humphries
Henry T. Sloane, to be known as "The Euphemia Sloane Coffin Bed," in memory of his sister, Euphemia Sloane Coffin

1939 "In Memoriam"
Dunlevy Milbank, in memory of his mother, Ella Dunlevy Milbank

1940 George Gibbs, to be known as "The George Gibbs Bed"
1942 Mrs. Huntington McLane, to be known as the "Therese K. Thorne Bed," in memory of her mother
Cornelia Livingston Pell, in memory of Alfred Duane Pell
Frank Wallach, in memory of Ida May Wallach
1943 Stuart Duncan, to be known as "The Stuart Duncan Bed"
1944 Anonymous, to be known as "The Dr. William Darrach Bed"
John Fraser, in memory of his parents, Alexander and Elizabeth Fraser
1945 Robert W. Carle, in memory of his mother, to be known as the "Cornelia Willets Carle Bed" for general hospital use including harelip and cleft palate cases
1947 W. and J. Sloane
Frederick Sturges, Jr., Mrs. Mary Armit Sturges, Mrs. Catharine Armit Chapman and Frederick Sturges, III, in memory of Frederick Sturges
Walter S. Gifford, in memory of his son, Walter Sherman Gifford, Jr.
Ida L. Darling, known as the "Richards Memorial Bed"
John Sloane, in memory of his wife, Elsie Nicoll Sloane, to be known as the "Elsie Nicoll Sloane Bed"
Elisa Smith Mabon, in memory of her husband, James Brown Mabon
1948 Otto M. Eidlitz, to be known as the "Eidlitz Bed"
1949 Effie B. Shearman
1950 Isabel Shields Kemp, to be known as "Mary M. Shields and the Dr. Robert Coleman Kemp Free Bed"
1951 Gerrish Hill Milliken
1952 William Dzus, to be known as the "Ukrainian Institute of America, Inc. Bed"
1953 Estate of Charlotte C. Garretson, to be known as the "Charlotte Higbee Kelsey Bed"
W. Alton Jones Foundation, Inc., to be known as the "Nettie Marie Jones Bed"

Memorial Endowed Beds for Research Purposes

1948 Mrs. William Barclay Parsons, in memory of her husband, William Barclay Parsons
Muriel Jane Rudinger Foundation, Inc., to be known as the "Muriel Jane Rudinger Bed"
1950 Charles E. Culpeper Foundation, Inc. (two beds)
1952 John F. Bush Memorial Bed
Estate of Selma Boyd, two beds each to be known as a "Boyd Bed"
Bruce Barton, in memory of his wife, to be known as the "Esther Randall Barton Memorial Bed"
1953 Herman Goldman Foundation, Inc.
W. Alton Jones Foundation, Inc., in memory of Mamie W. Marvin

Endowed Rooms

1903 Henry H. Rogers, known as "Room J"
1905 Mrs. Morris K. Jesup, to be known as the "Eliza DeWitt Memorial Room"
1910 Mrs. John Stewart Kennedy, in memory of her husband, to be known as the "J. S. K. Memorial Room"
1912 Peter Cumming, to be known as "Peter Cumming Memorial Room"
1926 Alumnae Association of the School of Nursing of The Presbyterian Hospital, to be known as the "Amabel G. Roberts Memorial Room"
1928 Mrs. William Sloane, to be known as "The William Sloane Room for Graduate Nurses"
1930 The Sarah A. Hard Taylor Memorial Fund, to be known as "The Sarah A. Hard Taylor Room"
1935 Mrs. Herbert Neal, in memory of her husband, James Norman Hill, deceased

1937 S. Augusta Mora, in memory of her husband, Frank Mora, and mother, Sarah Robson Van De Water

Babies Hospital

1892 The Cribside Committee, known as "Cradyl-Nyst"
1894 Miss Ellen James Evans
Mrs. Henry G. Trevor
1895 Mrs. Evan T. Walker
Mrs. Richard Arnold, in memory of Georgiana Arnold
1897 Mr. and Mrs. Chas. M. Fry, known as the "Mr. and Mrs. Chas. M. Fry Bed"
Mrs. Geo. Kemp, "For the use and purposes of the Hospital"
1898 Mrs. Oliver G. Jennings, known as the "Brewster Bed"
1899 Mr. and Mrs. John Sherman Hoyt, in memory of John Sherman Hoyt, Jr.
1900 Mrs. Elizabeth Chamberlin Lockwood, in memory of Emily Beaver Chamberlin
1902 Mr. and Mrs. W. E. Dodge, in memory of Grace Osborn
Henry P. Wertheim, in memory of Clara W. Wertheim
1904 Mr. and Mrs. George Arents, in memory of George Arents Brown
Estate of Mrs. Chas. Harvey Hartman
1905 Mrs. J. Henry Lane
Mrs. Daniel S. Lamont, known as the "Julia Lamont Bed"
1907 The Cribside Committee
1908 Arthur W. Butler, in memory of Elizabeth Marshall Butler
1910 Dr. and Mrs. L. Emmett Holt, in memory of Kenneth M. Holt
Edwin Clarence Moller, in memory of Peter Moller
1911 Emily A. Watson, in memory of Wheeler Watson
Mrs. Bradley Martin, in memory of David Bradley Martin
1912 In loving memory of J. Bradley Cumings, endowed by his friends. "Greater love hath no man than this, that a man lay down his life for his friends." — *St. John 15:13*
1914 Mrs. Andrew Carnegie, in memory of Archibald Fraser Barrow
Mrs. Robert W. Todd, known as the "Mabel Todd Bed"
1916 Mr. and Mrs. John Chandler Moore, in memory of Edward de Bébian Moore
Mrs. John Hubbard, in memory of Margaret Fahnestock
Mrs. Clarence M. Hyde, known as the "Clara Mathewson Hyde Bed"
1917 Harris Brisbane Dick, known as the "Harris Brisbane Dick Free Bed"
Mrs. Edward S. Harkness, known as the "Thomas Stillman Taylor Bed"
Mr. and Mrs. Walter A. Hirsch, in memory of John Walter Hirsch
1919 Mr. and Mrs. Daniel Schnakenberg, in memory of their daughter, Anna Kate Bartlett
Mrs. John Jay Knox, in memory of John Jay Knox
Mrs. John Jay Knox, in memory of Dr. Reuel B. Kimball
1920 Mrs. Andrew Carnegie, "A thanks offering for Louise Carnegie Miller"
1921 The Estate of Jacob H. Schiff
1922 The Cribside Committee, in memory of Sarah Elizabeth Williams
Mr. and Mrs. Simon Guggenheim, in memory of their son, John S. Guggenheim
1923 Mr. and Mrs. Herman Armour Nichols, "In loving memory of Marie Louise Nichols"
1929 The Estate of Julia M. Stout
1930 Edith C. Thompson, in memory of her mother, Mrs. Grace H. Thompson
1934 West End Collegiate Church
1935 The Estate of Daniel Schnakenberg, in memory of his children, Daniel Schnakenberg, Jr., and Marie Schnakenberg
1936 The Estate of Carrie Guggenheim
1938 The Estate of Emily S. Hornblower, in memory of her stepdaughter, Susie Sanford Hornblower
1949 Dr. Frederic H. Bartlett, "Endowed in loving memory of Frederic H. Bartlett, M.D., 1872-1948, by his patients and other friends to commemorate his many years of faithful service in Babies Hospital"
1950 The Estate of Emelyn L. Coolidge, in memory of Marianna Wheeler and Emelyn L. Coolidge, M.D., to be known as "The Wheeler-Coolidge Bed"

Neurological Institute

1929 Red Cross Endowed Bed for Nurses
Rivington-Dwyer Endowed Room for Nurses
1943 Alice Dunning Starr, in memory of her husband, Allen Starr

Memorial Endowed Beds for Research Purposes

1952 Estate of John H. Bahrenburg, in memory of John H. Bahrenburg and Elizabeth Bahrenburg (ten beds)

New York Orthopaedic Dispensary and Hospital

1883 Miss C. B. Hicks, continued in perpetuity by Buchanan Winthrop
1886 Mrs. Elizabeth Milbank Anderson, four beds, in memory of J. Milbank Anderson
1891 Alfred Corning Clark, three beds
Edward Severin Clark, two beds, to be known as the "Edward Severin Clark Beds"
Mrs. Henry S. Winthrop
1893 Mrs. William D. Sloane, in memory of William Douglas Sloane, Jr.
James K. Gracie, in memory of Anna Bulloch Gracie
Miss Sarah B. Gibbs
1894 Mrs. Richard Tylden Auchmuty, two beds, in memory of Richard Tylden Auchmuty
James H. Jones
1896 Mrs. William Astor, in memory of Helen Roosevelt
Mrs. Evan T. Walker, in memory of John J. Walker
1897 Mrs. William D. Sloane, two beds, one bed in memory of Maria Louise Vanderbilt and one in memory of Emilie Vanderbilt Burden
1898 Mrs. Charles B. Alexander, for her daughter, named the "Harriet Alexander Bed"
1901 Mrs. N. A. Baldwin, in memory of Louise Suydam Duer
Mrs. Benjamin Brewster, in memory of Benjamin Brewster
Henry T. Sloane. Jessie and Emily Sloane, bed endowed by their father
Mrs. Marion Story, in memory of M. Furman Hunt
1902 James Henry Smith, two beds, in memory of George Smith
Miss Emily A. Watson, in memory of Mrs. Mary J. Walker
1904 Miss Cornelia Prime, in memory of her brother, Temple Prime
Miss Helen Phipps
James K. Gracie, in memory of Esther Gracie Ogden
1906 Miss Caroline White
Mrs. M. Dwight Collier, in memory of Maurice Dwight Collier
1908 Mrs. H. N. Munn, Mrs. Augusta Munn Tilney and Orson D. Munn in memory of Henry Norcross Munn
1911 Estate of Everetta C. Whitney
Miss Josephine C. Smith, in memory of her father, Dr. Edward A. Smith, and her mother, Rebecca Miller Smith
1913 Estate of Marion de Forest Clark, in memory of Julian Bouton Clark
An anonymous donor, to be known as "Mary Townsend Cuyler Bed"
Carolina F. Butterfield, in memory of Frederick Falconer Butterfield
1915 Miss Emily Trevor
Mrs. Frederick W. Vanderbilt to be known as "The Louise Bed"
George Grant Mason, two beds, in memory of his uncle, James Henry Smith
1916 Henry M. Tilford, in memory of Catharine Hunt Tilford
Estate of Miss Clementine Furniss, to be known as the "Clementine Furniss Bed"
An anonymous donor
1917 Mrs. Charles H. Senff, in memory of her little son, Henry Senff
Mrs. A. Murray Young, in memory of her great uncle, Wilson G. Hunt

1919 R. Fulton Cutting, to be known as the "Helen Suydam Cutting Bed"
Mrs. Frederick Delano Hitch
Levi P. Morton, in memory of Anna Livingston Morton
Miss Georgiana G. R. Wendel, two beds, "In Memory of My Sister, Augusta A. S. Wendel"
Various donors, in memory of Theodore Roosevelt
1920 Mrs. John Hobart Warren
1921 Mrs. Winthrop W. Aldrich, in memory of her little son, Winthrop Williams Aldrich, Jr.
F. Ambrose Clark, to be known as "The Florence L. Clark Bed"
1922 Mrs. David T. Dana, in memory of her mother, Mrs. M. Dwight Collier
1924 Estate of Charlotte Bruce Bickmore, in memory of Albert Smith Bickmore, Jr.
Mrs. Louise Ward McAllister Lewis, in memory of her mother
1925 Miss Elizabeth J. Hofer, two beds, in memory of Horatio C. Kretchmar
Percy Chubb, in memory of his wife
Junior Red Cross of the Public Schools of New York
Mrs. Douglas Robinson, in memory of her friend, Charles Allen Munn
1926 Junior Red Cross of the Public Schools of New York
1927 Darrach Home for Crippled Children, in memory of Dr. May Darrach
1928 Mrs. Mary L. Schoonmaker, ten beds, in memory of Sylvanus Lothrop Schoonmaker and Frank Layng Schoonmaker
Estate of Henry D. Dickinson, in memory of Hathaway M. Dickinson
1930 James T. and Sarah Bancroft Leavitt, to be known as the "Mrs. James T. Leavitt Bed"
1934 Henry C. deRham. Frederic F. deRham and Clarisse deRham Rutherfurd, in memory of their parents, Charles and Emily Howe deRham
1935 Mrs. Percy R. Pyne and family, in memory of Meredith Howland Pyne
1936 Miss Elizabeth Stewart Hamilton, in memory of Mrs. John Hobart Warren, to be known as the "Harriette Mott Warren Bed"
Mrs. Edward S. Harkness, to be known as "Dorcas House Bed" in dear memory of Wilma Gideon
1938 Miss Grace Howard Potter, to be known as the "Howard and Mary Louisa Potter Bed," in memory of her father and mother

Endowed Rooms

1922 Glenn Ford McKinney, a ward room in the country branch, in memory of his wife, Jean Webster McKinney
1929 400 of his friends and associates, a room in the private pavilion, in memory of H. Le Roy von Lackum, M.D., surgeon in this hospital, 1916-1928

Herman Knapp Memorial Eye Hospital
(Institute of Ophthalmology)

1883 Mrs. Oswald Ottendorfer
1884 Miss Henrietta A. Lenox
1895 Miss Mary Morris van den Heuval
1897 Mrs. Giovanni Ceccarini
1913 Miss Catherine A. Bliss
Miss D. Willis James
1918 Truman Peck Stone
1921 Miss Rosie Bernheimer (In memory of her parents)
1923 Miss Mary Wiley (In memory of her brother, George Wiley)
1928 Mrs. Matilda Townsend Palmer
1931 Leo Doblin
1936 Charles M. Brooks

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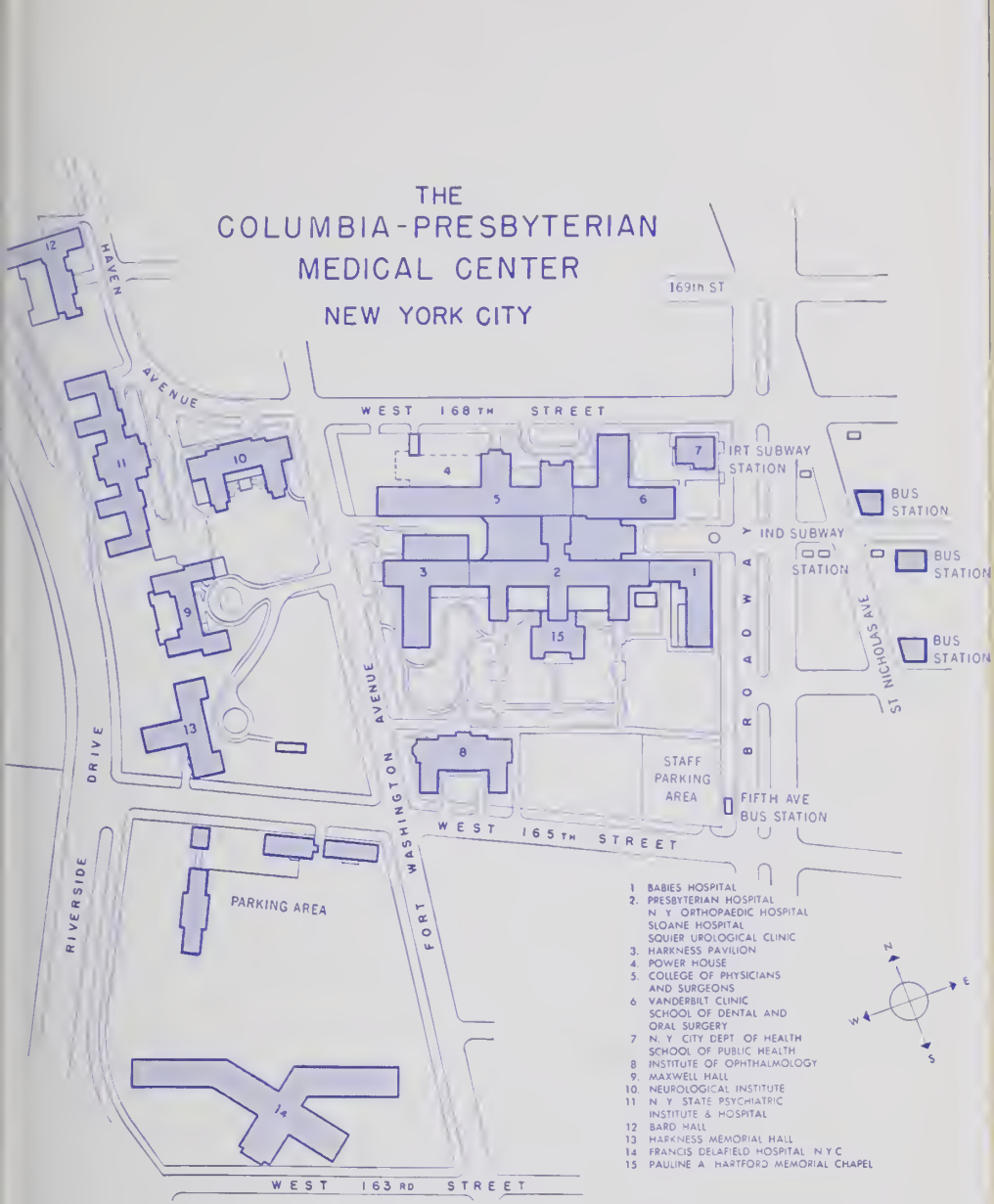
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THE
COLUMBIA-PRESBYTERIAN
MEDICAL CENTER
NEW YORK CITY
169th ST
HAVEN
AVENUE
WEST 168TH STREET
IRT SUBWAY STATION
BUS STATION
IND SUBWAY STATION
BUS STATION
BUS STATION
BROADWAY
ST NICHOLAS AVE
AMSTERDAM AVENUE
FORT WASHINGTON AVENUE
RIVERSIDE DRIVE
STAFF PARKING AREA
FIFTH AVE BUS STATION
WEST 165TH STREET
PARKING AREA
WEST 163RD STREET
1 BABIES HOSPITAL
2. PRESBYTERIAN HOSPITAL
N Y ORTHOPAEDIC HOSPITAL
SLOANE HOSPITAL
SQUIER UROLOGICAL CLINIC
3. HARKNESS PAVILION
4. POWER HOUSE
5. COLLEGE OF PHYSICIANS AND SURGEONS
6 VANDERBILT CLINIC
SCHOOL OF DENTAL AND ORAL SURGERY
7 N. Y CITY DEPT OF HEALTH
SCHOOL OF PUBLIC HEALTH
8 INSTITUTE OF OPHTHALMOLOGY
9. MAXWELL HALL
10. NEUROLOGICAL INSTITUTE
11 N Y STATE PSYCHIATRIC INSTITUTE & HOSPITAL
12 BARD HALL
13 HARKNESS MEMORIAL HALL
14 FRANCIS DELAFIELD HOSPITAL N Y C
15 PAULINE A HARTFORD MEMORIAL CHAPEL
N
E
W
S



BABIES HOSPITAL

HARKNESS PAVILION

INSTITUTE OF OPHTHALMOLOGY

MARY HARKNESS HOME

NEUROLOGICAL INSTITUTE

N. Y. ORTHOPAEDIC HOSPITAL

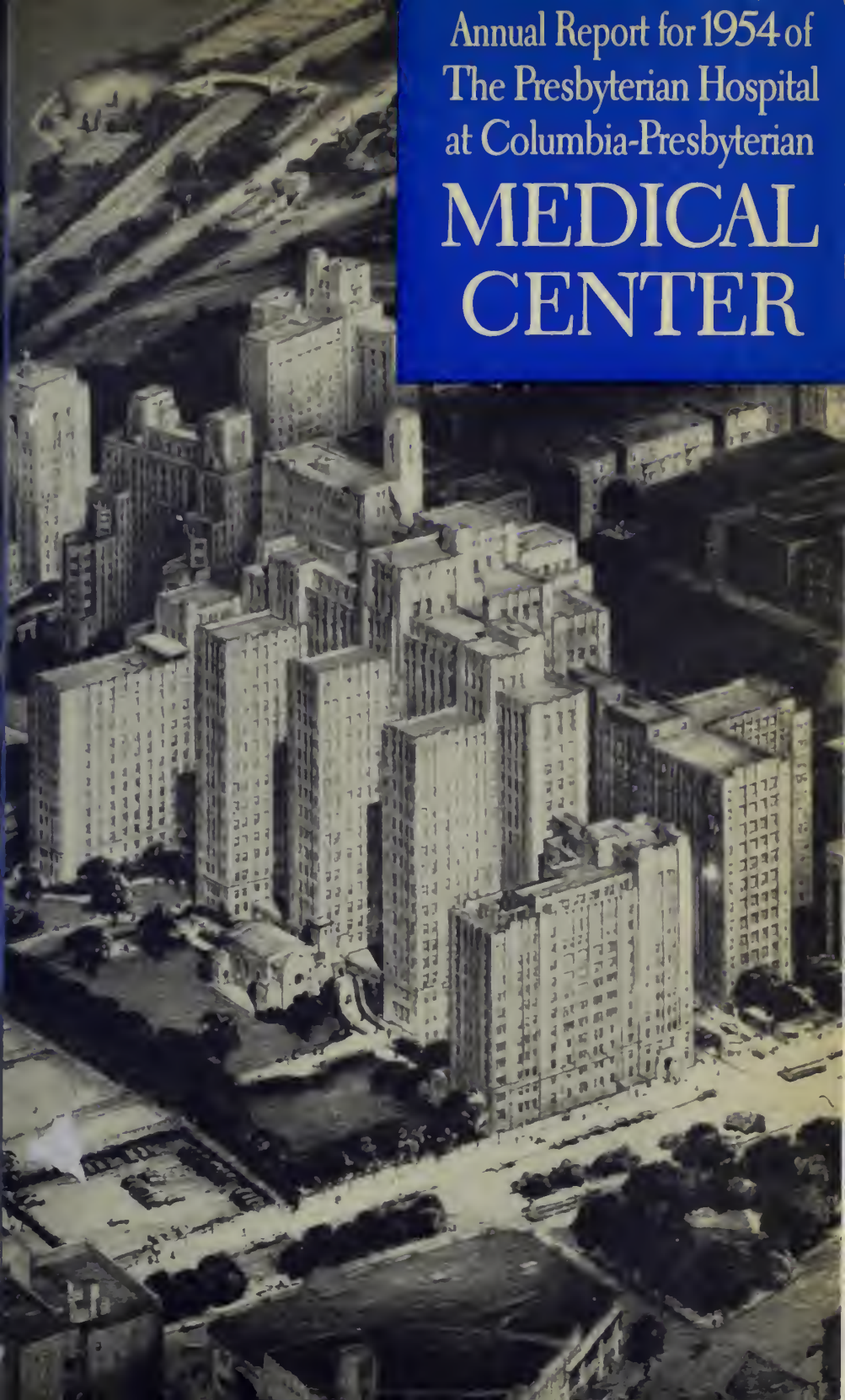
PRESBYTERIAN HOSPITAL

SLOANE HOSPITAL

SQUIER UROLOGICAL CLINIC

VANDERBILT CLINIC

Annual Report for 1954 of The Presbyterian Hospital at Columbia-Presbyterian MEDICAL CENTER



Gifts and Bequests

The activities of the various hospitals at the Medical Center are supported to a substantial extent by the income from bequests and devises from friends of the various hospitals, who have desired to insure the continuation of their help to the sick of New York.

Bequests and devises may be made in the following form:

FORM OF BEQUEST

I give and bequeath to The Presbyterian Hospital in the City of New York the sum ..... dollars ($ .....) to be applied to the use and benefit of the said Hospital, under the direction of the Trustees thereof.

FORM OF DEVISE

I give and devise to The Presbyterian Hospital in the City of New York all that, etc. (describe the property), to be had and holden to the said The Presbyterian Hospital in the City of New York, its successors and assigns, for the use and benefit of the said Hospital.

In case it is desired to make the bequest to the Hospital as a memorial "In memory of ....." may be added to the Form of Bequest or Devise.

In all instances the gift should be to "The Presbyterian Hospital in the City of New York" in its full corporate name even when mentioning the particular use to which it is to be put.

The corporation will, because of the consolidation of the corporations formerly administering the Medical Center hospitals, become entitled to gifts to the former corporations. It will, therefore, not be necessary to change the provisions of any will naming The Babies Hospital of the City of New York, Neurological Institute of New York or New York Orthopaedic Dispensary and Hospital as beneficiary.

EDWARD C. BENCH,
Treasurer.

EIGHTY-SIXTH ANNUAL REPORT

OF

THE PRESBYTERIAN HOSPITAL
IN THE CITY OF NEW YORK

Including

BABIES HOSPITAL
HARKNESS PAVILION
INSTITUTE OF OPHTHALMOLOGY
MARY HARKNESS HOME
NEUROLOGICAL INSTITUTE
N. Y. ORTHOPAEDIC HOSPITAL
PRESBYTERIAN HOSPITAL
SLOANE HOSPITAL FOR WOMEN
SQUIER UROLOGICAL CLINIC
VANDERBILT CLINIC

BROADWAY AND 168th STREET
NEW YORK 32, N. Y.



For the Twelve Months ended December 31, 1954

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Origin and Functions of the Medical Center

The Medical Center comprises a group of long established hospitals of high standing which, in affiliation with the College of Physicians and Surgeons of Columbia University, furnish an integrated program to provide the highest quality of medical care for the sick and injured, to advance knowledge regarding the cause, prevention and treatment of disease and disability, and to train men and women in the professions of medicine, dentistry, nursing, public health, and allied fields. Through the affiliation between the hospitals and the University the members of the staffs of the hospitals are nominated by Columbia University, and teaching and research are conducted in all of the hospitals.

A brief description of the origin and of the functions of each hospital unit of the Medical Center is given in the following paragraphs.

The Presbyterian Hospital

The Presbyterian Hospital, founded as a general hospital in 1868 by James Lenox, was originally located on the block bounded by Madison and Park Avenues between 70th and 71st Streets. On April 25, 1911, Presbyterian Hospital made its original arrangement with Columbia University's College of Physicians and Surgeons for coordinating the care of the sick with the educational and research program of the University. Now Presbyterian Hospital is the largest single unit of the Medical Center. The Hospital occupies a 22-story building in which are the wards of the medical and surgical services, obstetrical and gynecological services, urological service, ear, nose and throat service, dermatological service and the orthopedic surgery service. To provide for personal contact between doctor and patient, the Hospital is divided into floor units of between 60 and 70 beds, each unit is fully equipped and has a special staff of doctors, nurses, social workers and dietitians.

The Presbyterian Hospital in the City of New York is the corporate title for all the voluntary hospitals and clinics at The Columbia-Presbyterian Medical Center. The group consists of the following units:

Babies Hospital

Babies Hospital, 167th Street and Broadway, founded in 1887, provides for general medical and surgical care of infants and children up to their thirteenth birthday. and care for premature babies. The total capacity of the Hos-

pital is 191. One floor is devoted to the care of private and semi-private patients. Both outdoor and indoor playrooms are provided for convalescent children. Laboratories are operated for the routine and research work of the Hospital in pathology, microbiology and chemistry. An X-ray and fluoroscopic department is operated under the direction of the Hospital radiologist. An outpatient department is maintained in Vanderbilt Clinic by the visiting and house staff of the Hospital. In addition to the general medical and surgical clinics there are special clinics for children suffering from heart disease, tuberculosis, epilepsy, asthma and other diseases.

Harkness Pavilion

Harkness Pavilion, 180 Forth Washington Avenue, erected at the time of the establishment of the Medical Center, is available for the accommodation of 283 adult private patients of the attending staff.

The Mary Harkness Convalescent Home

Mary Harkness Convalescent Home, King Street, Port Chester, N. Y., opened in 1937 to provide convalescent care for adults and the new Strong Memorial Wing was opened in 1952 to care for handicapped children whose families are unable to provide the convalescent care following poliomyelitis, orthopedic, medical and surgical procedures. In a beautiful country setting there are facilities for convalescent care available for 35 adults and 22 children.

The Institute of Ophthalmology

Institute of Ophthalmology, 635 West 165th Street, opened in 1933 has complete facilities for the medical and surgical treatment of adult and child patients with diseases of the eye. There are private, semi-private and ward facilities. The total bed capacity is 92. On January 1, 1940, the work of the Herman Knapp Memorial Eye Hospital was taken over by the Institute.

The Neurological Institute

Neurological Institute, 168th Street and Forth Washington Avenue, one of the first nongovernmental hospitals in this country for the treatment of nervous diseases, was founded in 1909. It moved from East 67th Street to the Medical Center in 1929. Its affiliation with The Presbyterian Hospital has made possible a broad basic program of teaching and research in neurology and in the treatment of diseases of the nervous system and surgical conditions

of the brain and nervous system. Facilities are provided for 211 bed patients of which 124 are for ward patients.

New York Orthopaedic Dispensary and Hospital

The New York Orthopaedic Dispensary and Hospital opened its first dispensary in 1866 largely as a result of the interest Theodore Roosevelt, whose son and namesake became President, had in the care of the crippled. In succeeding years, the dispensary grew into a hospital with beds for ward and private patients. In 1911, the first Spine Fusion Operation for Potts Disease (tuberculosis of the spine) was performed by Dr. Russell A. Hibbs. This successful operation opened an entirely new era in the treatment of this disease. The Orthopaedic Dispensary and Hospital was located in its own buildings at 420 East 59th Street until December 1950 when it moved to the Medical Center. On the 5th floor of the main building, 622 West 168th Street, facilities are available for the care and treatment of orthopedic conditions and fractures in children and adults.

The School of Nursing

The School of Nursing was founded in 1892 for the training of nurses. Since 1935 its educational program has been under the supervision of the Department of Nursing of the Faculty of Medicine of the College of Physicians and Surgeons of Columbia University. A three-year course in nursing is conducted, and the degree of Bachelor of Science is offered by the University to those properly qualified.

The Sloane Hospital for Women

Sloane Hospital for Women was built at West 59th Street and Amsterdam Avenue and presented to Columbia University by Mr. and Mrs. William D. Sloane in 1886. It now occupies three floors of The Presbyterian Hospital building for ward and semi-private patients and two floors in Harkness Pavilion for private patients. The total bed capacity is 192 of which 116 are ward beds. The deliveries in the Hospital totaled more than 3,800 in 1954.

The J. Bentley Squier Urological Clinic

The J. Bentley Squier Urological Clinic occupies the 10th floor of the Presbyterian Hospital building and the 10th floor of Babies Hospital. There are 67 beds for the care of adults and 19 beds for children. There are laboratories fully equipped to do diagnostic, X-ray, bacteriological, pathological, fluoro-

scopic, and research work. This unit has two large, especially equipped, operating rooms. The urological outpatient department is in Vanderbilt Clinic.

Vanderbilt Clinic

Vanderbilt Clinic, Broadway and 167th Street, presented to Columbia University by the Vanderbilt family in 1888, is the common outpatient department and admitting service for all the wards of all the units of The Presbyterian Hospital. It is a fully equipped dispensary offering complete medical, surgical and specialty services. Eligibility to the Clinic is determined by the admitting physician and the clinic interviewer and is limited to those unable to afford a private physician. The Group Practice Clinic, organized in 1946, has proved a forward step in the diagnosis and treatment of patients.

Other patient care institutions located at the Medical Center are —

The New York State Psychiatric Institute and Hospital, a 200 bed hospital, built and maintained by the State of New York with provisions for the study and treatment of all types of psychiatric disorders.

The Francis Delafield Hospital, built and maintained by the City of New York, is a 300 bed hospital for the treatment and study of cancer.

The Washington Heights Health and Teaching Center built and maintained by the City of New York.

Milestones of the Columbia-Presbyterian Medical Center

1928-1954

1928	Presbyterian Hospital including Sloane Hospital for Women and Squier Urological Clinic
	Vanderbilt Clinic
	College of Physicians and Surgeons
	School of Dental and Oral Surgery
	De Lamar Institute of Public Health
	Harkness Pavilion
	Anna C. Maxwell Hall
1929	Babies Hospital
	New York State Psychiatric Institute and Hospital (Built and maintained by the State of New York)
	Neurological Institute
1931	Bard Hall
1933	Institute of Ophthalmology
1937	Mary Harkness Convalescent Home
	College of Physicians and Surgeons—10 stores added to west wing
1940	Washington Heights Health and Teaching Center (Built and maintained by the City of New York)
1947	Edward S. Harkness Memorial Hall
1950	New York Orthopaedic Hospital—5th floor of Presbyterian Hospital reconstructed
	Francis Delafield Hospital (Built and maintained by the City of New York)
1951	Institute for Cancer Research
1952	The Pauline A. Hartford Memorial Chapel
	Strong Memorial Wing (Mary Harkness Convalescent Home)

Report of the President

Report of the President for 1954

The forward motion that has distinguished the healing arts particularly in the past decade continued unabated in 1954. Several important accomplishments will be outlined in this report. At the same time, though with possibly more varied opinions about the progress made, the national debate over the relative merits of privately versus publicly supported medicine continued.

As the largest and probably the most inclusive in its range of services of the privately supported medical centers, which is to say a voluntary hospital, Presbyterian naturally had an ascendant and clearly directed interest in the trends of support that are evolving. And because of its special position as the research and teaching hospital of Columbia University's College of Physicians and Surgeons, Presbyterian continued to play an important role in the unfolding drama of better health.

The march of science and the increased discussions of state-supported medicine are not unrelated. Whether we like it or not, the immense pressures of our times—including wars, recessions, inflation, and soaring population—inevitably loosed fresh considerations of virtually every aspect of our national life. It would be surprising indeed, if anything so vital as health did not come under this exacting review. So, while the drive for legislative support of so-called "socialized medicine" may have been less intense last year than in some previous years, the elevation of Health to Cabinet level in the Federal Government, and the consequent expectation of more official attention to some aspects of the care and treatment of the sick raised some fresh points for consideration.

At Presbyterian Hospital we have not always felt that it was within our domain to suggest the extent to which the implement of Government should be used in medicine; but we have felt it our duty to insist that the general arrangements under which we have operated for so long, and which have fostered such notable progress, should not be lightly passed over. Voluntary organizations have brought much to our national life. They can bring more. The saddest and most ill-considered attitude of our friends would be to become either discouraged because of the enlarged interest of government in the ends we seek, or to become indifferent because of the mistaken belief that state-supported agencies had taken over where we had left off.

The vivid fact is that our Hospital, closely affiliated with the College of

Physicians and Surgeons of Columbia University, both privately supported, and many other medical centers are still in the forefront of the advances being made. Individually and collectively they are doing work quite necessary and not duplicated elsewhere.

But we welcome this national interest in improved health and in its support because we feel that in any rational re-examination of the situation the example set by the voluntary organizations, and their accomplishments, will prove that for a long time we have been on the right course. The system that has evolved under which many of the most able men and women of the Nation give of their time and talents to act as trustees and to oversee the affairs of these voluntary organizations, providing that atmosphere in which the professional men can best pursue their humanitarian ends, is a system only the short sighted would fail to support. But at the same time it obviously rests upon us to continually review our own works to make sure we are abreast of the social requirements and changes of the times.

One of these changes, of course, has been in the much greater use of hospitals by the public at large. While one might say that the very increase in population has been the major cause of this, the figures indicate that this is not the sole, or even the main, reason. For while New York's population has risen 15 per cent over the past 20 years, admissions to Presbyterian Hospital have increased 76 per cent during the same period. In an earlier era of large houses and plentiful servants the sick were frequently cared for at home. Today's small apartments and the shortage or absence of servants make it necessary for the sick to go to hospitals. Simultaneously, and perhaps of even greater importance, there has occurred a decided change in public attitudes towards hospitals, due to the influence of hospitalization insurance, growth of medical knowledge, and special equipment and techniques for modern diagnosis and treatment. Today, people come to hospitals expecting quick recovery, not prolonged illness. Hospitals are no longer places where people go as a last resort. In 1872, at Presbyterian Hospital, 10.6 per cent of those admitted died. Last year this was reduced to 2.6 per cent, a marvelous statistical testimonial to the advances made. At the same time, the average length of stay in Presbyterian Hospital has declined from forty-six days to twelve days.

There is this point that might well be pondered: voluntary hospitals are not just something to be called upon in time of emergency. They serve continuously in the community, like the churches and schools. This, obviously, is doubly true of the teaching and research hospitals.

Hospitals require the support not only of individuals and foundations, but equally from business and from the civic organizations of citizens, and, in accord with the changing economic and social pattern, from the wide range of the public. Even the very worthwhile assistance resulting from health in-

surance plans, valuable as it is, does not meet the ever increasing hospital costs. Health is one of our greatest private enterprises. Every penny from the coins of the Mothers' Marches to the millions spent by foundations and pharmaceutical houses counts in this effort. None should shirk. To paraphrase the current slogan: The life your contribution saves may be your own.

University and Hospital Cooperation

From the accounts in the daily press, the lay reader may conclude that we have all but conquered infectious diseases. It is true that great strides have been made, but it is equally true that we are only beginning to uncover the mysteries of chronic diseases. These diseases often represent years of stress and neglect. They are naturally more common among our older folks, who are increasing in both number and in percentage of population. It is because of the phenomenal advances in every branch of medical science that life expectancy has nearly doubled in the last fifty years.

Substantial contribution to this progress has been made by the College of Physicians and Surgeons through the investigative and research work carried out under the direction of the teaching staff in the College who also have appointments in the clinical services in the Hospital. To quote from the report of Dr. Willard C. Rappleye, Dean of the Faculty of Medicine of Columbia University, among the noteworthy contributions to medical science were: "pioneer studies in hormonal interrelations of the pituitary gland and of isotopes in intermediary metabolism of a variety of physiologic substances; experimental studies of muscular dystrophies, the chemistry of blood group substances and the role of blood volume in shock, the portacaval shunt in the treatment of cirrhosis of the liver and other advances in cardiac and blood vessel surgery, successful resection of the head of the pancreas for cancer, discovery of bacitracin, studies in the diagnosis and treatment of adrenal tumors, iodine uptake in thyroid carcinoma, definition of electrolyte disturbances in Addison's disease, the role of streptoccal infection in scarlet fever and rheumatic fever, demonstration of viral etiology of the common cold, first clinical use of penicillin in the United States, the cephalin flocculation reaction, discovery of acid phosphatase in the blood and its use in the diagnosis of cancer of the prostate, the first clinical use of Vitamin B_{12}, introduction of helium-oxygen mixtures for obstructed breathing, chemical recognition of pheochromocytoma and the role of nor-epinephrine, the chemistry of the cell nucleus, the isolation of the milk factor in breast cancer in mice pioneer studies of circulation with radioactive sodium, the control of influenza meningitis, and the character and behavior of bacterial genes."

Cooperative research continues in every area of medicine as is outlined in the reports of the Directors of Services.

The Financial Picture in 1954

Each year it is our responsibility to report on the financial health of the Hospital. The year 1954 was financially significant in that there has been some leveling off of the Hospital's operating expenses, which have been rising so rapidly since 1945. As a result it was unnecessary to increase the Hospital's published rates. The net loss for 1954 was $97,000 as compared to $369,000 the year before.

Increased reimbursement rates from Associated Hospital Service and also from the City of New York for the care of medically indigent were helpful in decreasing the deficit, and we are grateful for their assistance. The importance of adequate reimbursement rates from these two sources is obvious when it is realized that 60 per cent of the patients hospitalized at Presbyterian Hospital are in these two categories.

It is strongly urged that both of these sources take positive steps to reimburse hospitals promptly and more adequately on the basis of costs including full provision for depreciation. There is every indication that costs will resume their climb and these reimbursement rates must keep pace in order to maintain a high quality of patient care.

Following is a summary of the Hospital's patient care statistics and financial results:

In 1954 the Presbyterian Hospital . . .		
provided	449,100	days of hospital care
for	36,400	in-patients
and clinic care for	56,400	out-patients
who made	405,600	clinic visits
this cost	$ 9,974,000	for salaries
and	$ 6,754,000	for supplies, services and depreciation
Totaling	$16,728,000	
we received	$11,766,000	from patients
	$ 3,520,000	from endowment income and gifts
	$ 1,345,000	from other services
totaling	$16,631,000	
the difference	$ 97,000	must be made up from General Funds

The cost of the care given to patients in the wards and clinics of the Hospital exceeded payments received during the year by over $3,700,000. This charitable service represents 44 per cent of the total operating costs of the

wards and clinics and would not have been possible without endowment and gifts from friends. This is an interesting example of the great value to the public of the work supported by voluntary contributions.

As of January 1, 1955 the Trustees approved amendments to the Hospital's Group Retirement Plan to provide more adequate benefits to employees as well as to those employees who retired after attaining age 65, many of whom are not eligible to receive Social Security benefits. The enthusiastic and appreciative response to these changes has been most gratifying.

Contributions

To those who continued their support of the Hospital in 1954 we make grateful acknowledgment. And we are especially delighted to report that there were 1,265 new contributors this year. These contributors included individuals, corporations and foundations. The report of the Treasurer, and the statements of the various auxiliaries, will give a comprehensive view of the contributions.

But special notice should be taken of several items. One was a grant from the United States Public Health Service, now, as mentioned before, having Cabinet representation. This grant bought a 24 million volt betatron for both therapy and research. Installation will be completed in 1955. This can be cited as one example of federal aid in this important field.

Another significant and generous contribution of $110,000 helps to further develop a residency program of high order. At the present time there are 207 doctors in the residency program and 28 interns, a total of 235. The cost to the Hospital for this program is $850,000 yearly. As will be noted below, continued and enlarged support of this program is ranked very high among the needs of the Hospital.

Important and quite generous contributions were received from a substantial list of foundations. These were for general as well as specific purposes such as research in glaucoma, anesthesiology, and to help meet the cost of free care given the poor in the wards and clinics. Research funds also received needed replenishment.

The Hospital has welcomed the increasing interest of private citizen groups. As one example, the work of our seizure clinic for children and young adults has been in part supported since 1953 by the Variety Club Foundation to Combat Epilepsy, recently affiliated with the United Epilepsy Association. New York's Variety Club, Tent No. 35, has conducted events which have served the dual purpose of focusing public attention on this disease while at the same time raising funds for the clinic.

Another activity of ever continuing importance is the endowment of beds. Six more fully endowed beds were established in 1954. These, along with the many established in previous years, serve two main purposes: (1) They

permit doctors to study diseases as they actually occur, and (2) they relieve patients of some of the financial worry that so frequently surrounds illness and, indeed, may contribute to it. To reap full benefits from years of basic research, to check experimental findings with observational studies, and to exact no charge from the patients, it is obvious that endowment for research beds is vital.

Under the direction of the United Hospital Fund, six teams from Presbyterian Hospital raised $173,441 in the annual campaign for funds.

Specific Projects Needing Funds

In line with oncoming needs of the Hospital, the Development Committee of the Board of Trustees has evolved a comprehensive program.

For construction and current operating funds it includes:

A modern pediatric psychiatric clinic.

Research laboratory quarters for the pediatric service.

Alterations in the Neurological Institute and equipment to provide

(a) modern X-ray and other facilities.

(b) a psychiatric unit.

Housing for graduate nurses and residents.

To insure continuing work in medical science it is the desire of the Trustees to build additional endowment for the coming generations. Endowment is especially needed for:

Increased support for the residency training programs.

Vanderbilt Clinic.

Babies Hospital.

Neurological Institute.

School of Nursing.

Support of a full-time clinical professional staff.

Memorial beds for research.

Auxiliaries

As of May 11, 1954, the Cribside Social Service Committee amalgamated with the Board of Women Managers of the Babies Hospital. This action was a natural development as the two auxiliaries have devoted their interests to the Babies Hospital for many years. The Board has a combined membership and officers with two committees, Cribside Social Service and Cribside Thrift Shop, carrying on the specific interest of Cribside.

The Mary Harkness Convalescent Home Auxiliary, organized in 1953, has enlarged its membership and activities. The Neurological Institute, the New York Orthopaedic Hospital and the Presbyterian Hospital auxiliaries each

has carried on its own program and given much in the respective areas of interest. The more than 200 women serving with these auxiliaries bring to the Hospital a wealth of good will and service.

The increased service of the Volunteer Department in the past three years is of great help to the Hospital. All units of the Hospital use volunteers. The hours per month averaged 7,040, an increase of 24 per cent over 1953, and an increase of 106 per cent since 1951. Last year there were 171 day volunteers giving 67,013 hours and 124 night volunteers contributing 17,461 hours.

Sincere thanks are extended to all the volunteers who have expressed in Presbyterian Hospital their community responsibility, as well as their personal consideration for others.

Changes and Additions to the Hospital's Board and Administrative Staff

Presbyterian Hospital has benefited through the years from the unselfish devotion of many men and women. During the past year we have suffered the loss of four trustees and the Executive Vice-President. Each contributed materially to the development of the Medical Center. Each has left his mark. It would not be possible here to enumerate their accomplishments.

Memorial Resolutions adopted by the Board of Trustees following the deaths of Trustees Cornelius R. Agnew, William E. Birdsall, Thatcher M. Brown, Sr. and William Hale Harkness, and John S. Parke, Executive Vice-President of the Hospital are a part of this report.

We record here our great sense of loss for Columbia University in the death on November 18, 1954, of Frederick Coykendall, Chairman of the Board of Trustees of the University since 1933. Mr. Coykendall was closely associated with the early planning and development of the Medical Center and maintained throughout his life an active interest in medical education, public health, dentistry and nursing.

Edward L. Shea, a member of the Presbyterian Hospital Corporation, was elected a member of the Board of Trustees in October. Fourteen new members have been elected to the Corporation.

Alvin J. Binkert, associated with the Hospital since 1941, and the Hospital's Assistant Vice-President for Administration since 1948, was appointed Vice-President and General Manager of the Presbyterian Hospital September 13, 1954.

Richard N. Kerst, Assistant Vice-President, was appointed to serve also as Assistant Treasurer of the Hospital.

Professional appointments and promotions are recorded in the reports of the Directors of Services and are listed in the professional staff section of this report.

The Pauline A. Hartford Memorial Chapel

The use and influence of The Pauline A. Hartford Memorial Chapel have far exceeded our expectations. The Chapel was dedicated in June, 1952. Protestant, Catholic and Jewish services are held regularly and are attended by patients, visitors, staff and personnel. A midweek Vesper Service is held under the sponsorship of medical students, when a guest speaker is heard. A member of the professional staff and a medical student participate in the service. The choir is made up of doctors, students, nurses and technicians. Organ concerts are provided daily in the Chapel and are broadcast to the patients, as are all Chapel services. During the year, in addition to the regular services, there have been many Memorial and other services of special importance.

The Chaplaincy Service ministers to the spiritual life of the entire Hospital family. There are on the staff in addition to Chaplain Robert B. Reeves, Jr., Father Philip Michael Mulcahy, Father Gerard DiSenso, Rabbi Jeremiah J. Berman*, and the Reverend Charles E. Souter, Associate Protestant Chaplain. In addition there are four assistant chaplains.

The Strength of Presbyterian Hospital

From our earliest history, foreign visitors have been impressed with the sense of responsibility that Americans feel for the public good. The lively actions taken in consequence of that sense of responsibility result in such outward expressions as our Medical Center. And that sense permeates with a cooperative atmosphere the things undertaken by the Hospital.

All of us—citizens who contribute monetary support, doctors who contribute skill and research, nurses who serve so effectively; all of us whether in small jobs or great ones—share the joy of knowing that we participated in a great work during an important year. Likewise, we share in the opportunity of maintaining The Presbyterian Hospital at the Columbia-Presbyterian Medical Center as a foremost voluntary-teaching hospital, and we are grateful for that opportunity.

CHARLES P. COOPER,
President.

March 15, 1955

*Deceased January 5, 1955.

In Memoriam

CORNELIUS REA AGNEW

At a meeting of the Executive Committee of the Trustees of the Presbyterian Hospital in the City of New York held December 13, 1954 the following minute was read and adopted by rising vote:

Cornelius Rea Agnew, a member of the Board of Trustees of The Presbyterian Hospital in the City of New York from 1913 to 1954, died in his home in New York City on November 23, 1954 at the age of eighty-four.

Not long after his graduation from Princeton with the Class of 1891, he became associated with the Farmers Loan & Trust Co., and in 1909 was made Vice-President of that institution. In 1930 he was elected a Vice-President of the National City Bank, in charge of the City Bank Farmers Branch. Thereafter, due to his experience in banking, he was elected a Trustee and Vice-President of the Franklin Savings Bank of this City, where he served with distinction for many years.

While banking was his main business interest, his activities were not confined to that field. He served as a Director of two railroads, and his constant desire to aid his fellow citizens made his training available not only to the Presbyterian Hospital but to the Children's Aid Society of which he was a Trustee; to the New York Zoological Society of which he was a Trustee and Treasurer; and to the Fifth Avenue Presbyterian Church of which he was both an Elder and Trustee.

His interest in and devotion to The Presbyterian Hospital were great. He was Treasurer from April 1920 through March 1950; a member of the Finance, Real Estate and Public Interest Committees, and Vice-Chairman of the Personnel Committee. This record tells but the formal part of his labors. Through each and every year of his Trusteeship he accepted responsibility and expended time and energy beyond the call of duty. Thorough, modest, and sympathetic in his dealings with associates and staff, his fidelity, intelligence and business experience were of inestimable value to the Hospital.

When to these characteristics are added his innate courtesy and gentleness, his strong religious convictions and an obvious honesty of character, the loss suffered by his friends in the Board of Trustees becomes manifest. By this Minute of the Board we record our deep and abiding sorrow over his death, and be it

RESOLVED, that this expression of our loss be made a part of the permanent records of the Hospital, and a copy of this resolution be sent to his family.

W. E. S. GRISWOLD, JR.,
Secretary

CHARLES P. COOPER,
President

In Memoriam

WILLIAM E. BIRDSALL

The President suspended the regular order of business at a meeting of Trustees held on April 26, 1954 and the following memorial resolution for Mr. William E. Birdsall, who passed away on April 9, 1954, was read by Mr. Edward C. Bench, and adopted by rising vote:

As a member of the Board of Trustees of The Presbyterian Hospital, a member of the Planning Committee, the Personnel and The Development Committees, William E. Birdsall devoted himself with deep interest and unstinting zeal to the affairs of the Hospital.

He first became interested in Hospital matters while he was in the office of Dean Sage, as he was Mr. Sage's chief law assistant. His interest deepened while he was working on the legal affairs of Edward S. Harkness so that when he became a member of the Presbyterian Board in June 1951, he had a broad knowledge of the Hospital's problems. He was ever ready to work hard on any assignment and was always prepared to give sound advice. The work of the Hospital was close to his heart and he was continually seeking ways and means to aid the development of the institution.

He combined a keen insight into the practical phases of the Hospital's operations with a warm, personal interest in the human values represented by the staff and patients. His innate kindliness and his unfailing consideration for the feelings and the opinions of every one with whom he came into contact were the reflection of a generous and outgiving personality which earned for him the admiration and loyalty of a host of friends.

His contributions of both head and heart to the work of the Hospital will be sorely missed by his fellow members of the Board.

Be It Resolved, that this Minute be made a part of the records of the Hospital, and that a copy be sent to his family.

W. E. S. Griswold, Jr.,
Secretary

Charles P. Cooper,
President

In Memoriam

THATCHER M. BROWN, SR.

The President suspended the regular order of business of the Executive Committee of the Board of Trustees held on May 10, 1954 to observe a moment of silence in memory of Thatcher M. Brown, Sr. who passed away on May 2, 1954. Mr. William E. S. Griswold, Sr. read the following memorial resolution which was adopted by rising vote:

Thatcher M. Brown, a member of the Board of Trustees from 1907 to 1946, and thereafter an Honorary Member, died on May 2nd, 1954, at his home in New York City.

After his graduation from Yale in the Class of 1897, he immediately entered the banking business which older members of his family had established. Within ten years he became a partner in the firm, and, by his ability, energy and conscientious application rapidly became an indispensable member of the organization. He not only carried great responsibilities in his own company, but was called to the directorships of numerous corporations in this country and abroad.

Deeply interested in his own business, he yet gave generously of himself to other vital public activities, religious, educational and medical—thus following the tradition of his family for unstinted and constant support of civic and social betterment. He was an Elder of the Madison Avenue Presbyterian Church, and his board memberships over the years included the Union Theological Seminary, Lawrenceville School, and the Yale Alumni Fund Association, of which he was Chairman for two years and Class Agent for over five decades.

His interest in the Presbyterian Hospital was manifested early in his career. He became a member of its Board of Trustees in 1907, and at his own request he was elected an Honorary Trustee in 1946. To its affairs he brought his high intelligence, his contagious enthusiasm, and his Christian sense of obligation towards his suffering fellow men. Every assignment of Board or Committee work was keenly and thoroughly performed, none more laborious and successful than his task as Chairman of the Committee to raise funds for the present Medical Center. He was, for many years, down to the day of his death, Chairman of the Chaplains Committee. Due to his strong convictions he was vitally interested and extremely effective in widening and strengthening the religious activities throughout the Hospital.

For those accomplishments this Board desires to express its gratitude and admiration. It also desires to record the personal characteristics which endeared Thatcher Brown to every member of the Board. His warm

friendliness, his alert mind, his patience under pressure, his courtesy and willingness to help, his wide experience, all became manifest in his contacts with his associates. We shall miss him not only as a valued co-worker but as a friend whose memory we shall always cherish.

THEREFORE BE IT RESOLVED, that this minute be inscribed in the records of this Board, and that a copy be sent to his family.

W. E. S. GRISWOLD, JR.,
Secretary

CHARLES P. COOPER,
President

In Memoriam

FREDERICK COYKENDALL

At a meeting of the Trustees of the Presbyterian Hospital in the City of New York held November 22, 1954 the following minute was read and adopted by rising vote:

The members of the Board of Trustees of The Presbyterian Hospital in the City of New York desire to record their esteem and admiration for Frederick Coykendall, Chairman of the Board of Trustees of Columbia University who died on November 18, 1954 at his home in New York City.

Mr. Coykendall, a Trustee of Columbia University for many years, became Chairman of its Board in 1933, a position he held with great distinction until his death. In this important position he was one of the guiding spirits, not only of his University, but of the interests of the Columbia-Presbyterian Medical Center. To the problems of these institutions he brought a keen mind, a quiet yet decisive personality and a friendliness and spirit of cooperation which always won him the respect and affection of his associates.

It was through the activities of the Medical Center that the Trustees of the Presbyterian Hospital were privileged to know his qualities of leadership, and they were quick to recognize his integrity, his courtesy, his intelligence, and his high sense of honor and responsibility.

We record our deep sorrow over his loss and express our heartfelt sympathy to the members of his family and to his associates of the Board of Trustees of Columbia University.

And We Resolve that this Minute be made a part of the records of the Hospital and that a copy be sent to his family.

W. E. S. Griswold, Jr.,
Secretary

Charles P. Cooper,
President

In Memoriam

WILLIAM HALE HARKNESS

The President suspended the regular order of business at a meeting held on September 13, 1954 and asked the members of the Executive Committee to observe a moment of silence in memory of Mr. William Hale Harkness who passed away on August 12, 1954. Mr. Malcolm P. Aldrich read the following memorial minute which was adopted by rising vote:

The passing of William Hale Harkness on August 12, 1954 in the prime of his full life came as a sad and untimely tragedy to his many friends. He was elected to the Board of the Hospital on December 9, 1930 and was made a Vice-President January 10, 1944.

He had a special affection for The Presbyterian Hospital, and its welfare was a matter of deep and constant personal concern to him. He never shunned the assumption of special and added responsibilities and especially enjoyed conducting the Board meetings when occasion arose. He had a real understanding and appreciation of the Hospital's aims and ever strove to aid in the attainment of its objectives.

Through his affiliation with institutions such as The Presbyterian Hospital, The American Museum of Natural History, the Boys' Club, and many others, he showed a deep consciousness of his community responsibilities. He gave unstintingly of his time, attention and material goods to many charitable and educational organizations. Definite in his opinions, determined in his judgments of right and wrong, firm on matters of principle, and having great personal charm, he had the deep respect, esteem and affection of his colleagues and friends.

His fellow members on the Board of Trustees of The Presbyterian Hospital record with a profound sense of loss the passing of this friend and associate and they express their deep appreciation of his contribution of ability, industry and heart to the work of the Hospital. His memory will remain long with us.

W. E. S. Griswold, Jr.,
Secretary

Charles P. Cooper,
President

In Memoriam

JOHN SHEPARD PARKE

The President suspended the regular order of business at a meeting held on September 13, 1954 and asked the members of the Executive Committee to observe a moment of silence in memory of Mr. John Shepard Parke who passed away on August 13, 1954. Mr. Frederick A. O. Schwarz read the following memorial minute which was adopted by rising vote:

The Board of Trustees of The Presbyterian Hospital in the City of New York desires to record its great sense of loss in the death on August 13, 1954 of John Shepard Parke, Executive Vice-President of the Hospital and a friend of all the Trustees.

John Parke's interest in the Hospital dated from 1925 when he had charge of the construction of all the units at the Medical Center, as well as the Mary Harkness Convalescent Home in Port Chester, New York. Executive Vice-President since January 1, 1944, he devoted himself unselfishly to the administration, in all its various phases, of the Medical Center. His service was beyond the call of duty and was marked by his genuine interest in the well being of his fellow man without regard to race, creed, color or station in life.

He served our country in World War I on active duty in France and, following World War II, acted as consultant on hospitals for the Veterans Administration. He was a member of the New York City Housing Authority and Vice-Chairman from October 1944 until his death. During that period his advice and guidance in the design and construction of many housing developments under the supervision of the Authority helped to provide greatly improved homes for thousands of families in the lower income group. He was a trustee of Cornell University from 1948 to 1954, during which time he served continuously as Chairman of the Committee on Buildings and Grounds, and thus participated in the design and completion of many new buildings which remain as a record of his services to his Alma Mater.

This brief recital shows how ready John Parke was to accept assignments to work for the benefit of others. He gave generously of his time to many activities and made substantial contributions to the development of the general science of hospital administration. But the work at Presbyterian remained closest to his heart. He was continually seeking ways and means to have the Hospital maintain its position of leadership. It will long reap the rewards of his work on its behalf.

We shall miss John Parke not only as a valued co-worker but as a friend whose memory we shall cherish.

And We Resolve that this Minute be made a part of the records of the Hospital and that a copy be sent to his family.

W. E. S. Griswold, Jr.,
Secretary

Charles P. Cooper,
President

Report of the Treasurer

EXHIBIT A

THE PRESBYTERIAN H

BALANCE SHEET,

ASSETS

	December 31 1954	1953
ENDOWMENT FUNDS ASSETS:		
Investments:		
Bonds and stocks (approximate market quotation value—1954, $68,339,340)	$53,266,272	$52,054,399
Mortgages receivable, etc.	555,783	699,895
Cash	118,198	173,250
Total endowment funds assets	$53,940,253	$52,927,544
PLANT ASSETS:		
Property and equipment at original cost (less accumulated depreciation — 1954, $11,507,912; 1953, $10,815,000)	$21,658,076	$21,945,837
Replacement Fund—Bonds and stocks (approximate market quotation value—1954, $1,328,017)	1,203,836	485,321
Total plant assets	$22,861,912	$22,431,158
CURRENT FUNDS ASSETS:		
Investments — Bonds, etc. (approximate market quotation value—1954, $2,367,575)	$ 2,384,705	$ 2,762,442
Cash	369,519	240,399
Accounts receivable (less reserve—1954, $147,430; 1953, $123,876)	1,482,177	1,204,685
Supplies and materials	295,638	328,153
Interest accrued and dividends receivable	375,717	390,397
Prepaid insurance, etc.	74,439	70,688
Total current funds assets	$ 4,982,195	$ 4,996,764
Total	$81,784,360	$80,355,466

EXHIBIT A

CITY OF NEW YORK

1954 AND 1953

FUNDS AND LIABILITIES

	December 31 1954	1953
ENDOWMENT FUNDS (Exhibits C and D)	$53,940,253	$52,927,544
PLANT FUNDS:		
Capital invested in property and equipment	$21,658,076	$21,945,837
Replacement funds:		
Buildings	490,000	259,559
Furniture, fixtures and equipment	713,836	225,762
Total plant funds	$22,861,912	$22,431,158
CURRENT FUNDS AND LIABILITIES:		
General fund (Exhibit C)	$ 2,980,194	$ 3,311,515
Special expendable funds (Exhibit C)	1,025,544	832,497
Undistributed income from endowments	159,499	96,656
Accounts payable	277,458	315,917
Patients' credit balances	70,258	82,411
Accrued payroll and other expenses	469,242	357,768
Total current funds and liabilities	$ 4,982,195	$ 4,996,764
Total	$81,784,360	$80,355,466

EXHIBIT B

The Presbyterian Hospital in the City of New York

STATEMENT OF INCOME

For the Years Ended December 31, 1954 and 1953

	Year Ended December 31 1954	1953
OPERATING INCOME:		
Care of patients	$11,765,533	$10,931,905
Other services	1,345,244	1,314,297
Total	$13,110,777	$12,246,202
Transfer from special expendable funds (Exhibit C):		
For research	371,234	328,143
For other designated purposes	335,698	260,091
Total operating income	$13,817,709	$12,834,436
OPERATING EXPENSES:		
Administration	$ 215,175	$ 192,634
Assistant Secretary-Treasurer	130,944	123,744
Comptroller	304,697	283,887
Public Interest	75,218	76,131
Convalescent Home	204,147	192,225
Non-Professional Services:		
Buildings and Grounds	2,012,956	1,931,237
Food Service	2,195,664	2,161,098
Personnel and Protective	204,478	198,526
Other Non-Professional Services	639,257	608,890
Professional Services:		
Nursing	4,439,895	4,156,793
Professional Staff, Doctors' Offices & Research	2,106,684	1,947,093
Vanderbilt Clinic & Ancillary Services	3,317,751	3,194,910
Provision for Depreciation:		
Buildings	258,800	258,600
Furniture, fixtures and equipment	622,000	612,700
Total operating expenses	$16,727,666	$15,938,468
NET OPERATING LOSS	$ 2,909,957	$ 3,104,032
OTHER INCOME FOR GENERAL PURPOSES:		
Investment income	$ 2,207,619	$ 2,129,526
Contributions	605,447	605,414
	$ 2,813,066	$ 2,734,940
NET LOSS (charged to general fund—Exhibit C)	$ 96,891	$ 369,092

EXHIBIT C

The Presbyterian Hospital in the City of New York

SUMMARY OF FUND CHANGES

For the Years Ended December 31, 1954 and 1953

	Year Ended December 31 1954	1953
ENDOWMENT FUNDS		
alance, January 1	$52,927,544	$52,643,653
dd:		
Legacies and contributions	$ 186,793	$ 104,532
Gain from disposal of investments	775,916	127,109
Transfers from special expendable funds	50,000	52,250
	$ 1,012,709	$ 283,891
alance, December 31	$53,940,253	$52,927,544
GENERAL FUND		
alance, January 1	$ 3,311,515	$ 4,254,403
dd:		
Unrestricted legacies	$ 32,162	$ 91,912
Gain from disposal of investments	2,028	3,583
	$ 34,190	$ 95,495
Total	$ 3,345,705	$ 4,349,898
educt:		
Net loss (Exhibit B)	$ 96,891	$ 369,092
Expenditures for property and equipment	268,620	669,291
	$ 365,511	$ 1,038,383
alance, December 31	$ 2,980,194	$ 3,311,515
SPECIAL EXPENDABLE FUNDS		
alance, January 1	$ 832,497	$ 727,715
dd:		
Legacies and contributions	$ 685,195	$ 476,509
Investment and other income	475,309	391,401
	$ 1,160,504	$ 867,910
Total	$ 1,993,001	$ 1,595,625
educt:		
Transfers to:		
Operating income (Exhibit B)	$ 706,932	$ 588,234
Endowment funds	50,000	52,250
Expenditures for property and equipment	136,531	16,294
Miscellaneous	73,994	106,350
	$ 967,457	$ 763,128
alance, December 31	$ 1,025,544	$ 832,497

EXHIBIT D

The Presbyterian Hospital in the City of New York

ENDOWMENT FUNDS, DECEMBER 31, 1954

THE PRESBYTERIAN HOSPITAL:

Anonymous	$ 625,926
Anonymous—For Support of Residency Training	65,000
Arnstein, Daniel G.	65,000
Baker, Mrs. Frederick, Pathological Department	8,500
Briddon, C. K., Gold Medal	2,559
Brookman, Henry D.	50,000
Cary, Caroline Catherine	50,000
Coakley, Cornelius G., Trust	38,900
Colgate, Hannah, Memorial	60,794
Collins, Perry McDonough	548,999
Columbia University for Vanderbilt Clinic and Sloane Hospital	1,400,000
Cook, William W.	119,498
Cragin Fund	68,819
Davis, Isabel G.	568,985
Delano, Moreau	4,000
Department of Surgery Research	9,370
Dodge, The Cleveland H.	310,500
Dortic Memorial	99,024
Dows, Mrs. David	7,700
Dows, Margaret E.	5,360
Educational and Scientific Work	285,528
Eichner, Joseph Herman and Hannah, in Memory of	8,576
Eidlitz, Otto M.	415,272
Endowed Bed	1,680,868
Endowed Bed—Research	136,219
Faulkner, The Edward Daniels, Memorial for the Study and Treatment of Arthritis	100,000
Fiske Fund	104,236
FitzGerald, Frederick H. and Josephine F.	141,363
Flagler, Alice Manderlick	250,142
Foote, Edwin Bancroft	175,949
Ford, George W. and Eliza Lawson	330,911
General Endowment	257,400
Goldschmidt, Henry Philip	5,000
Gondran, Sophie M. and Adolph L.	100,000
Griffith, Griffith W. and Mary Jones, Memorial	1,319,573
Haller, Maria L.	2,609
Harkness, Edward S.	6,188,794
Harkness, Edward S., Memorial	14,000,000
Harkness, Edward S., Research	500,000
Harkness, Mary Stillman, Memorial Endowment	250,000
Harkness, The Mary S., for Convalescent Care	1,003,045
Hartford, The John A., Foundation	300,000
Hill, Marguerite S.	5,500
Institute of Ophthalmology, The	3,412,942
Jesup, Morris K. and Maria DeWitt	100,000
Jones, David, Memorial	300,000
Jones, Margarette A.	166,255
Keller Memorial	500

ENDOWMENT FUNDS, DECEMBER 31, 1954

The Presbyterian Hospital *(Continued)*

Kennedy, John Stewart	$ 1,828,699	
Kinnicutt, The G. Herman, Flower	5,000	
Knapp, The Herman, Memorial Eye Hospital Endowed Bed	60,375	
MacMillin, Isabel, Memorial	1,285,563	
Martin, Frederick Townsend	10,000	
Maxwell, Anna C., Memorial Library	5,976	
McCosh, Dr. Andrew J., Memorial	100,192	
McCready, Jeanne Campbell	106,529	
McGuire, Mary Madison	260,006	
Medical Laboratory Development Endowment	35,000	
Medical Scientific	317,226	
Ottman, for Cancer Research	20,000	
Quick, The Walter R.	14,943	
Room "J" Trust	5,294	
Sage, Dean, Memorial	28,253	
Sage, Dean, Scholarship	7,000	
Sage, Russell and Margaret Olivia, Memorial	878,188	
School of Nursing	196,533	
Sherry, The Bertha, Memorial	653,401	
Sidman Trust	1,072	
Sloane Hospital	783,257	
Sloane Hospital Babies' Alumni	17,112	
Sloane Hospital Research	25,000	
Squier Clinic	113,636	
Stilson, Ellen J. and Minnie	21,028	
Surgical Fellowship	60,000	
Terry, John T., in Memory of	40,767	
Tod, J. Kennedy, Memorial	100,102	
Tolfree, The Caroline O. and James E. Memorial	157,370	
Valentine, Isaac E., Memorial	563,227	
Van Norden, Kathryn L.	2,609	
Vanderbilt Clinic	156,806	
Weinman, Moses	5,360	
Welles, Frances Swan	10,000	
Westlake, Emory H. and Caroline B.	11,071	
Wheeler, The Dr. John M., Memorial	73,791	
Williams, William	342,658	
		$43,952,660

ENDOWMENT FUNDS, DECEMBER 31, 1954

The Babies Hospital:		
Cleft Palate Cases	$ 1,000	
Cribside Social Service Committee	12,828	
Educational Therapy	1,000	
Eichner, Joseph Herman and Hannah, in Memory of	8,576	
Endowed Bed	5,000	
General Endowment	10,000	
Harkness, Edward S., Educational and Scientific	600,000	
Harkness, Edward S.	1,199,775	
Harkness, Mary Stillman, Memorial Endowment	250,000	
Kimball, Reuel B.	57,738	
Lambert, Dr. Charles I., Memorial	10,000	
Rathbone, R. Bleecker	15,000	
Rumson Fund	20,470	
Videre, Leontine, Foundation	9,976	
		2,201,363
Neurological Institute:		
Blair Memorial	$ 3,127	
Endowed Bed-Research	130,000	
Ogilvie, Clinton, Memorial	9,970	
		143,097
New York Orthopaedic Dispensary and Hospital:		
Bridgman, Statira	$ 2,500	
Endowed Bed	598,843	
Farrell, Dr. Benjamin P., in Memory of	7,431	
General Endowment	833,259	
Hibbs, Russell A., Memorial Library	36,068	
Hurst, The Thomas D. and Kate	5,000	
Kane, Annie C., Fellowship	1,000,000	
Rathbone, R. Bleecker	15,000	
Tower, Mary T., in Memory of	30,569	
Watson, Emily A.	2,502,256	
White, Emily Vanderbilt	20,000	
Willard, Mary Livingston	5,000	
		5,055,926
Gain from Disposal of Endowment Fund Investments since November 1, 1946		2,587,207
Total Endowment Funds		$53,940,253

ACCOUNTANTS' CERTIFICATE

The Presbyterian Hospital
in the City of New York:

We have examined the balance sheet and supporting schedule of endowment funds of The Presbyterian Hospital in the City of New York as of December 31, 1954 and the related statement of income and summary of fund changes for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying balance sheet and schedule of endowment funds and the statement of income and summary of fund changes present fairly the financial position of the Hospital at December 31, 1954 and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Haskins & Sells
Certified Public Accountants

New York
January 27, 1955.

REPORT OF THE AUDITING COMMITTEE

To the Board of Trustees of The Presbyterian Hospital
in the City of New York:

Pursuant to Article VII of the By-Laws of The Presbyterian Hospital in the City of New York, the undersigned Auditing Committee appointed by your Board has chosen, with your approval, the firm of Haskins & Sells, as independent certified public accountants, to make an examination of the books and accounts of The Presbyterian Hospital in the City of New York for the fiscal year 1954.

We submit herewith, after due consideration by this Committee, a certificate of Messrs. Haskins & Sells dated January 27, 1955 relating to the Corporation's balance sheet and schedule of endowment funds as of December 31, 1954 and related statement of income and summary of fund changes for the year then ended, as the results of a satisfactory examination of the said books and accounts. Your Committee recommends that the Certificate and financial statements be accepted and approved.

J. W. Hornor, *Vice-Chairman*
Thatcher M. Brown, Jr.
Auditing Committee

New York
February 2, 1955.

EXHIBIT E

GROUP RETIREMENT PLAN ESTABLISHED BY THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

The retirement benefits provided by the Hospital under its Group Retirement Plan are partly provided by a Trust Fund established with the Guaranty Trust Company of New York and partly insured by the Travelers Insurance Company. The amounts set aside for retirement benefit purposes, which are not part of the assets of the Hospital, aggregated $3,515,415 at December 31, 1954. In accordance with the Hospital's undertaking under the Group Retirement Plan the amounts already set aside are sufficient to provide for all retirement benefits to which employees now retired and employees now eligible to retire at their own request are or would upon retirement be entitled under the Plan. In addition, they include provision for that portion of future retirement benefits to employees not now eligible for retirement at their own request, which has been funded through December 31, 1954 under the systematic program followed by the Hospital in financing such benefits.

Following is the Trustee's report for the year ended December 31, 1954 of the Retirement Fund Trust established by the Hospital:

Assets in Fund—January 1, 1954	$ 874,200
Payments to Fund	250,000
Net Income from Investments including Net Profit on Investments Disposed of	40,140
	$1,164,340
Disbursements for Retirement Benefits	52,466
Assets in Fund—December 31, 1954	$1,111,874

	*Book Value**
Consisting of:	
U. S. Government Obligations	$ 39,116
Industrial, Railroad and Public Utility Bonds	676,493
Preferred Stocks	101,039
Common Stocks	276,031
Cash	19,195
	$1,111,874

* Bonds are shown on amortized basis, stocks are shown at cost. The cash and approximate market value of the securities held as of December 31, 1954 totaled $1,247,013.

GUARANTY TRUST COMPANY OF NEW YORK,
Trustee

By WILLIAM F. LACKMAN
Second Vice-President

Following is a summary of the Retirement Fund Trust and the Travelers Insurance Company reserves at December 31, 1954:

Retirement Fund Trust-Guaranty Trust Company of New York, Trustee	$1,111,874
Travelers Insurance Company Reserve for Annuities Purchased	2,403,541
Total	$3,515,415

Reports of Services

Anesthesiology

EMANUEL M. PAPPER, M.D., *Director*

During 1954 many of the organizational problems of the Anesthesiology Service were brought closer to a satisfactory solution. The services of Drs. Shih Hsun Ngai, Beatrice Selvin, and Carter M. Ballinger were lost during this year. Dr. Ballinger resigned to become the Director of the Department of Anesthesiology at the University of Utah. These physicians were replaced by Drs. Eleanor C. Nelson, Norman A. Bergman and Rita A. Jacobs.

It is always gratifying, but by no means essential, that some of the activities in research become useful and accepted methods for the clinical care of patients. This has been our experience during 1954. From the standpoint of equipment, the nonrebreathing valve developed by Dr. Bernard R. Fink and a new laryngoscope blade also designed by Dr. Fink have become valuable in clinical practice. The nonrebreathing valve has been of great assistance in providing satisfactory general anesthesia for young children. In fact this technical advance based upon sound physiological considerations has been accepted in many institutions throughout the country.

Our methods for the care of infants have also improved by the development of a circle filter anesthesia apparatus designed in collaboration with Mr. Wayne Hay of the Ohio Chemical & Surgical Equipment Co. and tested by several members of the attending staff. The use of the muscle relaxant succinylcholine has increased during 1954 in keeping with the practice at other hospitals. This drug has facilitated surgical operation when relaxation was necessary in a safe and controlled manner. An increased application of hypothermia for clinical care of selected patients undergoing cardiovascular and neurological surgery has also taken place. Preliminary experiences with this form of "frozen sleep" suggest that usefulness for this method will be found in instances where reduction of the oxygen requirement is mandatory for the successful completion of certain operations upon the heart, great vessels, and the brain.

The Anesthesiology Service was particularly gratified and honored to have several distinguished visitors and speakers from foreign countries and the United States this year as in previous years. Among the foreign visitors of note were Drs. Harry Churchill-Davidson and Angus Smith of London and Dr. Torsten Gordh of Stockholm, Sweden. Among the distinguished American visitors were Drs. Henry K. Beecher of Harvard, James E. Eckenhoff of the University of Pennsylvania, Albert Faulconer of the Mayo Clinic, William Derrick of the University of Texas and others.

Members of the attending staff continued their activities in organizations related to the science and practice of anesthesiology. These included membership on the Special Committee on Infant Mortality of the Medical Society of the County of New York (Drs. Virginia Apgar and Duncan A. Holaday); the Program Committee of the New York State Society of Anesthesiologists (Dr. M. Jack Frumin); membership in the House of Delegates of the New York State Society of Anesthesiologists (Dr. Apgar); membership in the House of Delegates of the American Society of Anesthesiologists; Chairman of the Survey Committee for this area of the American Board of Anesthesiology; the Advisory Committee to the Postgraduate Assembly; Subcommittee on Anesthesia of the National Research Council; Consultant in Anesthesiology to the First Army and the Third Naval District, and President of the Association of University Anesthetists (Dr. Papper). Dr. Frumin was foreign guest speaker to the Mexican Congress of Anesthesiologists. Dr. Frumin also won first prize for his scientific exhibit at the Postgraduate Assembly in New York.

During 1954, 72 papers and presentations by members of the Service were made before medical and scientific organizations and 26 papers were published or accepted for publication.

The clinical responsibilities of the Anesthesiology Service continued large in volume. As of October 31st, 19,013 anesthesias were administered and 227 nerve blocks were performed. The mortality from anesthesia continued at a very low level. However, the goal of no mortality has not yet been attained.

Research Projects.

Most of the research projects, particularly those of a fundamental nature, were undertaken in conjunction with the College of Physicians and Surgeons. Research activities increased in scope during 1954, putting added pressure of considerable magnitude upon the relatively meager facilities for laboratory investigations available to the Anesthesiology Service. Dr. Holaday completed his studies on the effects of carbon dioxide retention on the acid base balance of blood and muscle. He found that a metabolic acidosis observed in whole blood developed in response to carbon dioxide retention and is accounted for in large part by the loss of sodium ion from whole blood. This work suggests also that organic acids are manufactured within cells during respiratory acidosis and are buffered in part by a shift of alkali from the extracellular fluid into the cell.

In collaboration with Dr. Edward Williams of the Medical Service, Dr. Holaday studied exsufflation with negative pressure in post-operative patients. They found that exsufflation with negative pressure is useful in clearing retained bronchial secretions of post-operative patients with or without

pulmonary atelectasis. This treatment also decreased post-anesthetic respiratory acidosis temporarily by hyperventilation. A less satisfactory effect was observed upon arterial oxygen saturation.

With Dr. Hubert L. Rosomoff of the Neurological Surgery Service, Dr. Holaday studied the cerebral blood flow and cerebral oxygen consumption in animals during hypothermia, concluding that cerebral blood flow varies proportionately with body temperature and that cerebral oxygen consumption varies with temperature to the same degree as does cerebral blood flow, so that arterial venous oxygen differences are unchanged. It was concluded that hypothermia probably produces no anoxic damage to brain tissue so long as adequate respiratory and cardiac functions are maintained. These principles were applied to clinical usage for the correction of vascular malfunctions of the brain by Drs. J. Lawrence Pool and Joseph Ransohoff, of the Neurological Surgery Service, and Dr. Ernest Salanitre of Anesthesiology in four patients.

In collaboration with Miss Mariagnes Verosky, Dr. Holaday established micromanometric methods for the analysis of respiratory gases in blood containing volatile anesthetic agents. Dr. Holaday and Dr. Jacob S. Israel advanced their studies of respiratory dynamics during anesthesia to the extent of developing a suitable method for the estimation of pulmonary elastance and airway resistance in anesthetized subjects. These measurements made possible the calculation of the work of respiration. They found that tidal respiratory exchange may vary considerably as a function of the variations in pulmonary resistance and elastance. Better knowledge of these effects is essential in order to provide adequate assisted ventilation to anesthetized patients. Drs. Holaday and Israel evaluated a mouth-to-mask method of artificial respiration at the request of the Chemical Corps Medical Laboratories, Army Chemical Center, Maryland. Six apneic anesthetized patients were ventilated for periods up to 90 minutes by this method. With an unobstructed airway adequate carbon dioxide excretion could be obtained by this method but oxygenation was less satisfactorily accomplished. It was recommended to the Department of the Army that further modifications were required before such a device could be considered useful for artificial respiration in combat areas.

Dr. Holaday continued his studies of mechanical respirators for potential use in clinical anesthesia. He also completed an evaluation of micro-volumetric methods for the analysis of oxygen content of blood samples in the presence of anesthetic agents. He concluded that these methods of measurement were reasonably accurate when used with blood samples containing moderate amounts of ether. However, storage of specimens for more than two hours caused considerable changes in oxygen and carbon dioxide content. Dr. Holaday continued his collaboration with Drs. Shih-Chun Wang of

the Department of Physiology, Shih-Hsun Ngai and Messrs. Cohen and Haber on the correlation of neuronal activity in the medulla with respiratory activity. They found that medullary neuronal activity continues in a manner dependent upon carbon dioxide tension and independent of the rhythm of artificial respiration in apneic animals.

Dr. Fink continued his studies of the airway with Dr. Juan M. Taveras of the Radiological Service at the Neurological Institute. From their observations, Drs. Fink and Taveras defined more precisely the various patterns of respiratory obstruction and developed suitable modifications of the technical aspects of endotracheal intubation. These studies of the airway are continuing in another direction in collaboration with Dr. Milos Basek of the Otolaryngological Service with roentgenographic and motion picture photography. Dr. Fink has also pursued his studies of the mechanism of closure of the larynx in man and experimental animals. He concluded that the closure of the larynx during laryngospasm is peculiar to man and is due to compression of the pre-epiglottic body produced by ascent of the larynx. The thyrohyoid muscle appears to be the most important means of closure in this action. The movements of the larynx during respiration have also been studied by Dr. Fink on a comparative physiological basis with the generous assistance of Dr. L. Goss of the New York Zoological Society.

Dr. Frumin has continued his studies of automatic administration of anesthesia employing nitrous oxide oxygen and succinylcholine. The apparatus necessary for this work was designed in collaboration with Mr. A. S. J. Lee. The details of this study were described in the annual report of the Dean of the Faculty of Medicine. The instrument has been used for the study of significant derangements in acid base balance, oxygenation, and the circulation during anesthesia. It has also proven practicable for the administration of anesthesia for clinical purposes.

Dr. Lester C. Mark has continued his studies of the anesthetic barbiturates in collaboration with Drs. Bernard B. Brodie and John Burns of the National Heart Institute. The persistent search for a truly ultra short acting barbiturate was unsuccessful. With Dr. Ngai, Dr. Vance Lauderdale, Jr. and Dr. Carolina I. Campomanes, Dr. Mark demonstrated that thiopental concentrations in the brain paralleled those in the plasma, proving that there was no blood brain barrier for thiopental. Preliminary studies suggest that thiobarbiturates penetrate the brain without difficulty, whereas oxygen analogues do not do so as rapidly.

Dr. Herbert Rackow is reviewing the anesthetic experiences of the last 5 years in operations for the correction of cleft palate and cleft lip. It is hoped that these findings will help solve a notoriously difficult problem in anesthetic management. Dr. Rackow conducted his studies of the vocal cords in anesthetized patients and has found contrasting behavior of the cords

in light and deep inhalation anesthesia. Dr. Rackow has begun his studies of tissue acids (related to the Krebs cycle group) in various anesthetic situations. There is reason to believe that some of these acids may be present in abnormal amounts if derangements in respiratory or circulatory functions occur during anesthesia. Dr. Nelson has pursued her studies of hypothermia with Dr. Holaday, and Drs. Ralph A. Deterling, Jr. and Shivaji Bhonslay of the Surgical Service. They found that a metabolic acidosis may develop during the course of hypothermia. Further studies are in progress to define more precisely the nature of the acid base disturbance and its possible bearing on the relatively high instance of ventricular fibrillation in marked reductions of body temperature. Dr. Bergman is studying the effects of anesthesia and operation upon children with meningocele and meningomyelocele during repair of these defects and in situations where the defects may exist as incidental secondary findings.

Dr. Apgar has continued her useful and important studies in problems of the physiology of fetal and newborn respiration and improving anesthetic methods for obstetrics. Dr. Herman Schwartz progressed in his studies of problems of face pain in collaboration with Dr. L. Laszlo Schwartz of the Dental School. They have established that there are definite trigger zones in some of the muscles of the face which are responsible for referred pain to the temporomandibular joint with its attendant disabilities of jaw motion. Dr. Schwartz has also been interested in the problems of obesity in relation to anesthetic management. He has summarized the influence of the physiological derangements of obesity on the course of anesthesia and the technical problems of administration of anesthesia to obese patients. These problems may be of such magnitude as to result in serious respiratory obstruction and circulatory depression. With Dr. Salanitre, Dr. Schwartz is reviewing the details of anesthetic conduct in operations upon patients with myasthenia gravis during the past 20 years.

Dr. Johannes Bartels is studying the fate of Arfonad in man. It is hoped that knowledge of the physiological disposition of Arfonad will lead to useful and interesting information of hemodynamic changes with induced arterial hypotension. Dr. Jacobs is currently investigating the clinical usefulness of venous pressure measurements as an index of impending shock under operating room conditions. Observations are still too fragmentary to report on the usefulness and practicality of this method. Dr. Marilyn M. Kritchman has concluded a collaborative study on psychological disturbances following anesthesia with Drs. Harvey Corman of the Pediatric Service, and Edward J. Hornick of the Medical Service. These findings have not as yet been systematized for evaluation.

These studies were made possible through the kindness and generosity of Mr. Charles B. Wrightsman, Burroughs Wellcome & Co. Inc., Abbott Labor-

atories, and the Ohio Chemical & Surgical Equipment Co. in their grants to the Anesthesiology Service of The Presbyterian Hospital and by grants to the Department of Anesthesiology of the College of Physicians and Surgeons by the National Institutes of Health, the National Tuberculosis Association, and The Squibb Institute for Medical Research.

Future Plans.

The plans for future development have not changed. They consist of the development of a permanent attending staff with considerable reduction in turnover to the slow rate necessary for continuity on the Service. This is an important key to the effective care of patients, the maintenance of a high level of performance for the training of residents, and the broadening of research activities.

Second in importance to skillful people is their workshop and their facilities. The Anesthesiology Service is still a "have not" in laboratory space and equipment. The pressures on our meager facilities have been very great. It is necessary that means will be found to make the space and its contents adequate for useful and creative work.

Dermatology

CARL T. NELSON, M.D., *Director*

It is with genuine sorrow that we record the death of Dr. Ralph Teicher on February 28, 1954, while on active duty in the Air Force. At the time of his death, Dr. Teicher was on leave of absence as Assistant Dermatologist in Vanderbilt Clinic. He had been a member of the staff since the completion of his residency training in Presbyterian Hospital in 1952. A young physician of great promise who had already made significant contributions to his chosen specialty, his loss will be keenly felt by all who knew him.

The year 1954 has been a busy one for the Dermatological Service. A total of 6,653 new patients were cared for in Vanderbilt Clinic and return visits numbered 27,032. There were 79 admissions to the Dermatological Service in Presbyterian Hospital and 763 patients were seen in consultation with other services. The serological research laboratory carried out 1,473 treponemal immobilization tests for patients admitted to the various services of the Medical Center and the Division of Mycology examined 3,154 specimens. Of the latter 929 were from hospitalized patients. The steady rise in demand for these specialized serological and mycological procedures is further evidence of their increased importance in the diagnosis and management of patients coming to the Columbia-Presbyterian Medical Center.

From another point of view, the past year has been one of high significance for the Dermatological Service. Authorization has been granted for the construction of departmental office space and an eight bed dermatological ward within Presbyterian Hospital. These facilities together with a projected increase in resident staff should do much to correct a deficiency which has plagued the Medical Center since its establishment more than a quarter of a century ago. The provision for an integrated dermatological ward unit not only will facilitate clinical investigation and teaching but also should make it possible to offer the house staff and nurses more adequate training in the care of the dermatological patient.

Changes in the staff during 1954 include the promotion of Drs. Anthony N. Domonkos, Meyer H. Slatkin and Milton B. Sloane from Assistant to Associate Attending Dermatologists in Vanderbilt Clinic. The resignation of Dr. Eugene F. Kelley, Attending Dermatologist in Vanderbilt Clinic, was accepted with regret. Dr. Kelley's loyal service to the Medical Center extended over a period of 26 years. Dr. Wilbur N. Hurlbut, Assistant Attending Dermatologist in Vanderbilt Clinic, and Dr. Theodore J. Michelfelder, Assistant Dermatologist in Vanderbilt Clinic, resigned to enter private prac-

tice elsewhere.

The research activities of members of the Dermatological Service during the past year continued to reflect a variety of interests. As heretofore, many of the projects utilized both the clinical facilities of Presbyterian Hospital or Vanderbilt Clinic, and the laboratories of the College of Physicians and Surgeons.

Dr. George C. Andrews has undertaken a study of the biology of *Demodex*, a parasite which is a common inhabitant of oily skin. He has also continued an investigation of the various protective measures employed in the treatment of dermatological patients with X-rays or radium. Dr. Marvin Brodey and Dr. Nelson have begun a follow-up study of a group of patients with pemphigus who have received long-term corticosteroid therapy in Presbyterian Hospital. Some of the first individuals ever successfully treated for this hitherto universally fatal disease are included in this group.

Dr. Rhoda W. Benham, in collaboration with Mrs. Christine Alexio and Mr. J. Dennis Pollack, has continued the study of methods for establishing the identity and pathogenicity of various species of *Candida*. Strains isolated from patients in the Mycology Section of Vanderbilt Clinic have provided material for a comparative study of the various media commonly employed for the morphological study of this genus. This investigation has been supported by a gift to the Department of Dermatology of the Medical School from Eli Lilly and Company. Dr. Helen O. Curth, aided by a grant to the Medical School from the United States Public Health Service, has continued her investigation of acanthosis nigricans and its relationship to cancer. Additional studies of the possible etiological factors in Behcet's syndrome have also been undertaken by Dr. Curth.

Dr. Paul Gross, with Dr. Sloane and Dr. Benjamin J. Chester, completed a study of the alkali-neutralizing ability of the skin in various eczematoid eruptions. The results of this work, which was conducted in Vanderbilt Clinic and in the United States Public Health Service Hospital, Staten Island, have now been published.

Dr. Beatrice M. Kesten, in collaboration with Dr. Benham and Dr. Margarita Silva, has continued an investigation of the relationships of the types of clinical infection caused by *T. rubrum* and the metabolic properties of the isolated micro-organism. The results indicate that there may be a surprisingly close correlation between the virulence of the dermatophyte for laboratory animals on the one hand, and its nutritional requirements and pigment production on the other. Again the unique facilities of the Mycology Section of Vanderbilt Clinic have proved to be very valuable in providing clinical material for this study which is supported by a grant to the Medical School from the United States Public Health Service.

Dr. J. Lowry Miller, with Dr. Slatkin and Dr. Justina H. Hill of the United

States Public Health Service, extended the studies on the value of the treponemal immobilization test in the identification of biological false positive reactors to standard tests for syphilis. Further investigations of the pattern of treponemal immobilization reactions in the blood serum and spinal fluid of patients in various stages of neurosyphilis have also been undertaken. This work, aided to a great extent in the past by a grant to the Medical School from the Division of Venereal Diseases, United States Public Health Service, and the Department of Health of the State of New York, is now largely supported by a loyal friend of the Dermatological Service.

Mrs. Julia M. Einbinder, Dr. Victor M. Torres and Dr. Nelson have undertaken an investigation of hexosamine levels in the blood serum and skin of patients with active psoriasis. In contrast to the findings in normal individuals, the serum and affected skin of psoriatics contain large amounts of hexosamine. Moreover, the levels found seem to be directly related to the extent and activity of the psoriasis.

During 1954, 22 papers were published by 17 members of the staff. In addition, the fourth edition of Dr. Andrews' textbook "Diseases of the Skin," was published, and Dr. Harvey Blank became the co-author of a new text entitled, "Viral Diseases of the Skin." The active participation of the staff in the proceedings of dermatological and other scientific organizations is evidenced by the fact that sixteen members gave presentations before various assemblies during the year. Participants in the post-graduate educational programs and symposia of the American Academy of Dermatology and Syphilology in 1954 included Drs. Andrews, Blank, Domonkos, Gross, Kesten and Miller.

It is again a pleasure to express my thanks to the members of the professional staff and to the nursing and administrative staffs for their cooperation during the past year. Their interest in promoting the welfare of the Dermatological Service, in furthering the care of patients, and in teaching residents and medical students is greatly appreciated. Thanks are also due the officers and trustees of Presbyterian Hospital for their sympathetic understanding and treatment of the problems of the Dermatological Service.

Medicine

ROBERT F. LOEB, M.D., *Director*

During the past year, a serious problem has arisen in the resident training program. It had been earnestly hoped and a degree of faith had developed that a procedure would be devised by the Armed Forces which would permit men to receive two years of training after their graduation from medical school and before their entrance into military service. It has been almost universally agreed that the nine month training period permitted in the war years was wholly inadequate. In recent years there has been continued uncertainty as to how much training would be permitted an individual, but in most instances men have been allowed the completion of two years of training. With the new devices set up by the Department of Defense to regularize procedure and to give opportunity for resident training, paradoxically chaos has resulted. It now turns out that but a small percentage of those who applied for commissions *and* permission for residency training will receive the latter. Furthermore, it appears that the benefits which teaching hospitals have to offer in the advanced training of physicians in this country will be given no consideration, as the assignments to residencies will be decided upon by a lottery. At the present moment it is not known whether none or all ten or what part of the current interns on the Medical Service who have accepted appointments as assistant residents may actually be available next July. It seems unfortunate that the agencies charged with the procurement of medical officers for the Armed Services are not able, in times of peace, to define procedure assuring men of training and teaching hospitals of house staffs at least as satisfactory as that employed during the war years.

The last year has witnessed an unusually large number of changes in the staff of the Medical Service. Dr. Robert L. Levy became Consulting Physician after having served as Attending Physician and directed the electrocardiographic laboratory and its activities for many years. Dr. Martin DeForest Smith retired after more than forty years as a member of the Medical Service. His precepts as a skilled physician dedicated to the devoted care of the sick will long continue to influence those who have been associated with him. Dr. Edward E. Fischel resigned to become Director of Medicine at the Bronx Hospital. Dr. James K. Alexander resigned to become Assistant Professor of Medicine at Baylor University. Dr. Stuart S. Blauner has also resigned. Dr. Samuel W. Lambert is on leave of absence due to illness and Dr. David Schachter has entered military service. Dr. Herbert F. Wilshusen resigned as Attending Physician at the Mary Harkness Convalescent Home

and has been succeeded by Dr. John T. Beaty. Dr. Kenneth B. Turner has been appointed Director of the electrocardiographic laboratory. Dr. Charles W. Frank acts as Director of the cardiorespiratory laboratory until next July when Dr. Alfred P. Fishman will join the staff and will assume this responsibility. Drs. Irving M. London, Gilbert H. Mudge, Hamilton Southworth and John V. Taggart have been made Associate Attending Physicians. Drs. Henry Aranow, Stuart W. Cosgriff, Albert R. Lamb, Jr., Kermit L. Pines and Calvin H. Plimpton have been promoted to Assistant Attending Physicians.

It is with deep regret that the untimely death of Dr. John R. West on June 29th is reported. Dr. West had ably directed the work of the cardiorespiratory laboratory. He was an outstanding young physician, teacher and investigator, respected and admired by colleagues, students and patients. He had already made notable scientific contributions in his field of interest and a brilliant future for him seemed assured. It is also with deep regret that the death of Dr. Louis Bauman is announced. Dr. Bauman had been associated with the Presbyterian Hospital for thirty-five years. His gentle qualities of character and his devotion to the Hospital will long be remembered.

Many distinctions have come to various members of the Medical Service in the past year. Dr. Michael Heidelberger received the International Emil von Behring Prize from the University of Marburg, Germany. He gave the Centennial Lecture and received a gold medal at the College of the City of New York and lectured at the symposium opening the Institute of Microbiology at Rutgers University. He lectured before the Microbiological Society of Stockholm and at the University of Uppsala. He was elected a Director of the Public Health Research Institute of New York and also an Honorary Fellow of the International Society of Hematologists. Dr. Yale Kneeland, Jr., was appointed Chairman of the Scientific Advisory Committee of the Common Cold Foundation. He was re-elected President of the Medical Board of Goldwater Memorial Hospital and was made Chairman of the Medical Committee of the Board of Trustees of the American University of Beirut. Dr. Franklin M. Hanger was made Consultant to the American Hospital in Paris. Dr. Stanley E. Bradley joined the Editorial Board of the Journal of Medical Education and served as Director of the Commission on Liver Diseases of the Armed Forces Epidemiological Board. He has also been made Consultant of the Air University at the Armed Forces Air Base at Randolph Field. Drs. London and Helen M. Ranney lectured before the International Congress of Hematology in Paris, and Dr. London gave the annual Alpha Omega Alpha lecture at Boston University. Dr. Ralph H. Boots was elected Chairman of the Board of Governors of the New York Chapter of the Arthritis and Rheumatism Foundation. Dr. Frederick R. Bailey is a member of the Board of Governors of the Family Health Maintenance Demonstration.

Dr. Alfred Gellhorn gave a series of lectures in many South American Universities. He was elected to membership of the Argentine Medical Association, the Medical-Surgical Society of Venezuela and the Cancer Societies of a number of South American countries. He also lectured at the Detroit Institute of Cancer Research and gave among other lectures in this country the Smith Memorial Lecture at the New York Academy of Medicine. Dr. Joseph W. Jailer lectured at the Ciba Foundation and at the Postgraduate and Middlesex Hospitals in London. He lectured at the Universities of Louvain and Brussels in Belgium and at the University of Paris as well as at various universities in this country. Dr. Alvan L. Barach delivered the Stoneburner Lectures at the Medical College of Virginia. Drs. George A. Perera and Edward E. Fischel addressed the Second World Congress of Cardiology. Dr. Perera was made a member of the Advisory Council of the Section on Medicine of the New York Academy of Medicine. Dr. Plimpton lectured at the International Gerontology Congress in London, Dr. Pines was made a member of the Council of the Clinical Society of the New York Diabetes Association. Dr. Charles A. Ragan continued as Chairman of the Metabolism and Nutrition Study Section of the United States Public Health Service. Dr. Karl Meyer served on the Scientific Advisory Committee of the Arthritis and Rheumatism Foundation and on the National Council to Combat Blindness. Dr. Charles A. Flood was elected to honorary foreign and corresponding membership respectively in the Uraguayan and Venezuelan Societies of Gastroenterology. He also lectured before the Pan American Congress of Gastroenterology in Brazil. Dr. Robert F. Loeb was elected President of the Association of American Physicians and to honorary membership in the Danish Society of Internal Medicine, the Norwegian Medical Society and the Belgian Academy of Medicine. It is gratifying to report that during the past year three members of the staff have declined five opportunities to head departments of medicine in other medical schools. This constitutes tangible evidence of the loyalty of the staff and the opportunities offered in full time positions at the Medical Center.

The practice of bringing distinguished guests in various branches of medical science to participate in clinical and teaching conferences has continued. In the past year the list of foreign visitors has included Professors U. S. von Euler, Gustav Nylin, F. Horace Smirk, J. R. S. McDowell and A. Bradford Hill. Additional overseas visitors were Drs. Åke Nordén, Sylvia Simpson and Bernt Hökfelt. Drs. A. Tinsley Harrison, D. W. Woolley, Benjamin Alexander, John H. Talbott, Walsh McDermott, George Hirst and others from various institutions in the United States have also participated in these exercises. As in the past we have had a number of outstanding Visiting Fellows from foreign universities including the Universities of Stockholm, London, Birmingham, Manchester, Lund and Paris. Again there have

been numerous American Fellows supported by the National Research Council, the United States Public Health Service, the Life Insurance Medical Research Fund, the American Cancer Society, the New York Heart Association, the Eli Lilly Foundation, the Arthritis and Rheumatism Foundation and other agencies working on the Medical Service and in the Medical College.

For many years there has been a deep and continued interest in problems relating to chronic diseases of the cardiorespiratory system by members of the staff of the Medical Service and in the Department of Medicine laboratories of the Medical School and at Bellevue and Goldwater Memorial Hospitals. Pioneer studies and significant contributions to knowledge in this field have been made through the integrated researches of these groups. Emphasis on research in these chronic and disabling disorders continues to grow because of the problems presented by the increasing life span which results in part from antibiotic therapy which now cures the intercurrent pneumonias fatal in former days. It appears inescapable that these diseases of the cardiorespiratory system will pose growing and major problems of an aging population.

As a result of advances in knowledge, many of which are to be credited to members of the Medical Service and the participating members of the Department of Medicine mentioned above, great advances in the surgical management of disease of the heart and lungs have been made possible. To expedite further research in human disease and to improve the diagnostic facilities and to make possible greater collaboration of the Medical, Surgical and Pediatric Services, the cardiorespiratory laboratory is being enlarged on the seventh floor. It is a great pleasure to acknowledge a generous gift from Mr. Daniel G. Arnstein which has made the equipment of this laboratory possible. It is also a pleasure to acknowledge another gift from Mr. Henry S. Mudd which has made it possible to acquire a mobile apparatus which can be used in the operating room to further the diagnostic studies of medical and surgical groups.

Dr. Kenneth B. Turner has initiated a number of changes in the procedures of the electrocardiographic laboratory. He has also reorganized the cardiac clinic in Vanderbilt Clinic and has initiated bi-weekly conferences in cardiology which are integrated with the Surgical and Pediatric Services. He has instituted weekly "cardiac rounds" in which patients presenting special problems are reviewed by members of the staff and students.

The research activities of members of the Medical Service have proven highly rewarding in the past year. The research program survives largely through generous donations made by friends both of the Hospital and of the Medical School. Thus, the Daniel G. Arnstein Fund established in the Presbyterian Hospital now constitutes an important "life line" for continu-

ing and significant contributions to salaries of a large number of members of the staff of the Hospital and University who are on a rigid full-time basis. Without this support it would be necessary for these teachers, investigators and clinicians to turn to private practice. Also, the Edward Daniels Faulkner Gift continues to make available the salaries for the full-time clinical and research staff and defrays many of the costs of the Arthritis Clinic. Most of the actual research endeavors are naturally carried out in the laboratories of the Department of Medicine of the Medical School and many of the research undertakings briefly outlined below are made possible through gifts and grants made to the University by the United States Public Health Service, the Office of Naval Research, the American Cancer Society and other governmental and private agencies.

Dr. London has continued studies on the metabolism of hemoglobin and of bile pigments, and on the mechanism of aging in human erythrocytes with grants from the Office of Naval Research, the American Cancer Society and the Eli Lilly Foundation. Investigation of the biologic synthesis of hemoglobin has been concerned with the effects of various factors and agents on this synthesis. The synthesis of heme and of globin can be dissociated in *in vitro* preparations of immature erythrocytes. The role of folic acid in affecting the relative rates of synthesis of heme and of globin is being studied in collaboration with Dr. Nicholas Myant of the Medical Research Council in London, and with Mrs. Halina Morell. The enhancement of heme synthesis by various agents such as sucrose and lactose and by a factor within the erythrocyte itself, and the inhibition of heme synthesis by various agents including lead, 2-4 dinitrophenol, and an extract of brewer's yeast have been more fully explored. These studies were performed with Dr. Elhanan Dimant, an Eli Lilly Fellow, and Mrs. Morell. In studies on the origin of bile pigment, C^{14} labelled mesoporphyrin, deuteroporphyrin and protoporphyrin have been prepared in collaboration with Dr. Philip Aisen, a Clinical Fellow. Studies on the possible conversion of these compounds to bile pigment are in progress.

In collaboration with Dr. Dimant, Miss Edith Landsberg and Mrs. Morell, the metabolic behavior of glutathione of human and avian erythrocytes has been studied. It is found that the reduced glutathione of human erythrocytes is in the dynamic state with a half life time of approximately four days. Glycine is readily incorporated into the reduced glutathione of human and avian erythrocytes *in vitro,* and the mechanism for this incorporation resides principally in the post-hemolytic residue of these cells. In association with Dr. Bertram Lowy, studies are in progress on the metabolism of nucleotides in human erythrocytes. Work is in progress with Dr. Ernst R. Jaffé on the relative rates of synthesis of various hemoglobins. In collaboration with Dr. Otto Plescia and Miss Grace Vanderhoff, the role of the aging process in the sus-

ceptibility of erythrocytes to immune hemolysis is under study.

During the last year, studies by Dr. Ranney on the recurrence of abnormal human hemoglobins in families have shown that the genes determining the presence of sickle and C hemoglobins are alleles. The study of abnormal hemoglobins in various clinical states has been continued. With Dr. Salome Gluecksohn Waelsch of the Department of Obstetrics, the presence of two electrophoretically different hemoglobin patterns in different strains of mice was established by Dr. Ranney. Further biochemical and genetic studies of these differences are being carried out.

Drs. Taggart and Schachter, supported by the Rockefeller Foundation and the Edward N. Gibbs Prize Fund of the New York Academy of Medicine, have continued their studies on the conjugation of glycine with various aliphatic and aromatic acids. In earlier studies, the enzyme which catalyzes the reaction (glycine N-acylase) had been obtained from beef liver mitochondria in a highly purified state. This enzyme has now been shown to be present in the kidney as well, and its relationship to certain tubular transport mechanisms has been established. The synthesis in the kidney of a variety of acylglycines accounts for the inhibition of hippurate excretion which is observed with various metabolic intermediates. A second series of studies, in collaboration with Mr. Peter T. Rowley, a fourth year medical student, is concerned with the identification of the organic acids which are mobilized and excreted in various clinical and experimental conditions.

Dr. Mudge has continued his studies on the mechanisms of electrolyte transport. In association with Dr. Helen M. Anderson, it has been demonstrated with an *in vitro* system of kidney slices that the state of potassium depletion is characterized by an intracellular acidosis of the kidney. This finding may explain some of the anomalous features of renal function observed in patients with potassium depletion. In association with Dr. Hans W. Neuberg, studies have been continued on the nature of the phosphorylation reactions of isolated mitochondria. The dynamic state has been examined with the use of radioactive isotopes and some of the characteristics of the dinitrophenol resistant formation of phosphoenol pyruvate have been defined. Dr. Mudge's work has been supported by a grant from the Rockefeller Foundation to Dr. Taggart.

Dr. Richard J. Cross, Walter W. Palmer Fellow in the Medical School, has continued his studies of the metabolism of ketone bodies, investigating the effects of previous dietary treatment on the formation of ketone bodies by surviving liver slices. The effects of both qualitative and quantitative changes in the carbohydrate, fat, and protein fed the animals before death were studied in considerable detail. Studies are at present under way with Dr. Mudge concerning the means by which the phosphorylated intermediates which are formed by liver mitochondria in the course of the generation of phospho-

enol-pyruvate from α-ketoglutarate. It is hoped that some of the mechanisms of aerobic phosphorylation can be uncovered by the use of the techniques of paper chromatography, microanalysis and radioactive isotopes.

Support for Dr. Stanley E. Bradley's study of the excretion of narrow dextran fractions in patients with proteinuria has been provided during the past year by a contract with the Department of Defense. Dr. John R. K. Preedy, Fulbright Travelling Fellow, from London Hospital, England, in Dr. Bradley's laboratory, developed a method for the quantitative determination of inulin and dextran simultaneously in blood and urine, which is making possible a comparison of dextran clearances with fractional protein clearances employing paper electrophoresis. Mrs. Katherine Baker, a volunteer, is engaged in working out a turbidometric method for estimating the molecular partition of dextran in the urine. It is hoped that the relative changes observed in clearances of dextrans and proteins during orthostasis will throw light on the permeability structure of the glomerular membrane. A method of analyzing the nephron population in terms of nephron delays has been further refined by Dr. Henry O. Wheeler, Life Insurance Medical Research Fund Fellow, and Dr. Alfred W. Childs, Fellow of the American Heart Association, both of whom joined Dr. Bradley's group in June, 1954. By reducing the time of sampling, they have shown that delay is much less widely distributed and much shorter than indicated by the cruder method first developed. Preliminary work suggests that delay times for individual urinary constituents may be differentiated. These methods are being applied in a study of renal disease in collaboration with Dr. Edgar Leifer. Dr. Burton Cominsky, a United States Public Health Service Fellow, has continued his studies of splanchnic blood volume in man and dog in collaboration with Drs. Bradley, Childs, Richard M. Hays, Preedy and Wheeler. An investigation of the splanchnic red cell mass in intact and splenectomized dogs has been completed. The splanchnic hematocrit was found to average 70 per cent of the arterial hematocrit, indicating that most of the blood in the splanchnic bed lies in small vessels, probably chiefly in the liver. Non-circulating, sequestered blood is not measured by this method. Investigation of changes induced in the splanchnic blood volume (SBV) by epinephrine and norepinephrine in dogs, and by sympathectomy and the upright position in man, are in progress. Collaborative studies of the effect of hypoxia in man on SBV with Drs. Fishman and André Cournand at Bellevue Hospital, and of corticoid extraction by the liver and kidney with Drs. Jailer and Nicholas P. Christy, are also under way. Dr. Owen D. Wade, Rockefeller Travelling Fellow, from the University of Birmingham, England, replaced Dr. Preedy who returned to England in September.

Dr. Meyer has continued chemical studies on (a) the composition and structure of connective tissue elements, (b) on the enzymatic breakdown of

the complex high molecular sugar acids isolated from these tissues, and (c) their biosynthesis in tissue culture, the latter in collaboration with Dr. Henry D. Grossfeld and Dr. Gabriel C. Godman, Assistant Professor in the Department of Surgery. In the past year, the identity of the disaccharide, the repeating unit of chondroitin sulfate A and C and of the newly discovered polysaccharide chondroitin was proven. The chondroitin sulfate occurring in skin, tendon, aorta and heart valves yielded a repeating disaccharide markedly different from that of the others. This important polysaccharide is being intensively studied. This work is carried out in collaboration with Mr. Eugene A. Davidson. In collaboration with Dr. Alfred Linker, the disaccharide produced by the action of bacterial hyaluronidases has been characterized by Dr. Meyer as a 4-5 unsaturated glucuronido 1-4 acetyl glucosamine. The analogous disaccharide is produced with chondroitin as the substrate. In collaboration with Dr. Philip Hoffman, enzymatic coupling between oligosaccharides of hyaluronate and of chondroitin sulfate was demonstrated. Some members of these "synthetic" sugars have been isolated and characterized. It is planned to study possible biological action of these compounds which probably do not occur normally. The production of hyaluronate and of chondroitin sulfate C was demonstrated by isolation in mass cultures of fibroblasts by Drs. Meyer and Grossfeld. The tissue culture technique may be expected to yield valuable information on the biosynthesis of the polysaccharides and the effect of hormones and other agents. The work of Dr. Meyer's laboratory was supported by grants of the New York Chapter of the Arthritis and Rheumatism Foundation and by the United States Public Health Service. Dr. Linker is an Eli Lilly Fellow.

Studies on complement, continued by Dr. Heidelberger, Dr. Plescia and Mr. Kenneth Amiraian, have disclosed thermodynamic and kinetic differences in the reactivities of the complements of various species probably due to the variation in the relative concentrations of the four components. A kinetic method for the estimation of complement was also developed. In collaboration with Dr. London possible relations between immune hemolysis and the metabolism of red blood cells are being investigated. Dr. Heidelberger's work on the relation between chemical constitution and immunological specificity has shown that a number of galactose-containing polysaccharides of animal and vegetable origin give precipitates in Type XIV antipneumococcus serum, presumably because of their content of galactose units possessing the same chemical linkages as does the galactose in the specific capsular polysaccharide of Type XIV pneumococcus. During the summer Dr. Heidelberger worked with Professor M. Stacey and Dr. S. A. Barker at the University of Birmingham, England, and found that the Type XIV polysaccharide contains glucose in addition to the galactose and N-acetylglucosamine previously reported by others. Glucose and amino-sugars

were also found in the specific polysaccharides of Types IX and XII pneumococcus, thus accounting for the extensive cross reactions of dextrans, glycogen and amylopectin in antisera to these pneumococcal types. The cooperation of Professor E. L. Hirst of Edinburgh, and Professor J. K. N. Jones, of Queens University, Kingston, Ontario, has also been enlisted, and progress should continue at an accelerated rate. Mr. John Adams is continuing the analysis of the content of the individual sugars in the various specific precipitates to obtain information, both on the combining proportions with antibody and on the heterogeneity or homogeneity of the carbohydrates used, the latter of wide biochemical interest. Dr. Felix Cordoba, a Research Fellow from Mexico City, is extending the studies on cross-reactivity to antisera obtained in rabbits, and Bertil Björklund, of Stockholm, is investigating the effect of the action of β-amylase on the cross-reactivity of glycogen and amylopectin with Dr. Heidelberger. Cooperation with Dr. C. D. Haagensen and his group on the Surgical Service, working on the mouse milk factor in mammary carcinoma is continuing. Support for Dr. Heidelberger's laboratory comes from the Harkness Fund and grants to the Medical School from the Rockefeller Foundation and the Department of the Army.

Dr. Perera continues his interest in hypertensive vascular disease with support from the United States Public Health Service, the Albert and Mary Lasker Foundation, and the Albert H. and Jessie D. Wiggin Foundation. His study of the entire evolution of the disease, through the accumulated data of 500 hypertensives, is now completed. In addition he has obtained strong evidences for the view that the presence or absence of blood pressure lability exerts substantial effects on the nature of the pathological complications and the ultimate prognosis. Grants from the Squibb Institute and the Irwin Strasburger Memorial Medical Fund made possible studies on the action of rauwolfia serpentina; he was able to confirm its beneficial effects in only early phases of hypertensive disease and obtained evidence that it might produce sodium retention, edema and congestive failure. Dr. Perera was unable to corroborate preliminary reports of the usefulness of sodium azide in essential hypertension. He is now actively engaged in studies of the newer antihypertensive drugs, such as hexamethonium and pentapyrrolidium compounds.

Dr. John H. Laragh, with support from a grant from the United States Public Health Service, has demonstrated in the sodium depleted dog, as he had shown in man, the fact that significant temporary increases in serum sodium occur following the feeding of potassium chloride. He has also demonstrated the exquisite sensitivity of the sodium depleted organism to the potassium ion, a fact of considerable importance in treatment of patients with certain disturbances of electrolyte metabolism. Dr. Laragh is also continuing studies on ascites formation in the relation of pituitary and adrenal

glands with Dr. Harry B. Van Dyke, Professor of Pharmacology. Dr. Laragh is also studying the relation of blood serum concentrations of sodium and potassium to the secretion of aldosterone by the adrenal cortex in collaboration with Dr. Herbert C. Stoerk of the Merck Institute.

Dr. Abbie I. Knowlton and Dr. Emily N. Loeb, of the Department of Medicine in the Medical School, in conjunction with Dr. Stoerk have inquired into the question of whether the hypertension seen in cortisone acetate-treated rats was related to the weight loss which customarily ensues in such animals. The addition of 10 per cent desiccated whole liver powder to a low sodium "complete" synthetic diet was found to prevent the weight loss in cortisone-fed rats; however, as severe hypertension developed as in animals on the basic diet, as did other evidences of steroidal action, i.e., adrenal and thymic atrophy. Prevention of weight loss could not be demonstrated if the hormone was presented subcutaneously rather than orally, or if the animals were adrenalectomized. Drs. Knowlton and Loeb are studying techniques of rat tissue analysis preparatory to comparing muscle and carcass concentration of electrolytes in various forms of renal and steroidal hypertension. Thus far, it appears among groups of adrenalectomized rats maintained on a high sodium intake, that the administration of desoxycortisone acetate induced significant increases in the amount of sodium present in carcass. This is not the case with similarly prepared animals injected with cortisone. Dr. Knowlton in conjunction with Drs. Jailer and Plimpton has studied the effects of the compound 9-fluorohydrocortisone acetate in two patients with adrenal insufficiency. Under constant dietary conditions, a sodium retaining effect was easily demonstrable following oral doses of 0.25 to 1.0 mg. daily. Evidence of a carbohydrate or hydrocortisone-like effect remained equivocal despite doses in one patient of 6 mg. daily.

With support from the United States Public Health Service, Dr. Sidney C. Werner has devised a new, simple and highly accurate test for hyperthyroidism using triiodothyronine and the 24-hour I^{131} uptake method. A small dose (75 micrograms) of the hormone is given daily for a week and a sharp decrease in uptake of the iodine isotope occurs in all conditions other than hyperthyroidism. A group of ten euthyroid patients with the early eye changes of Graves' has been studied by Dr. Werner. The thyroid gland was shown in this work to give different responses from normal to triiodothyronine and thyrotropin despite the euthyroid status. A study of the effects of thyrotropin and sodium iodide in Graves' disease has lent support to the view of this worker that Graves' disease is mediated by mechanisms apart from the pituitary. Despite relief of the hyperthyroidism, the gland was shown to be still responsive to small doses of thyrotropic hormone. With Dr. Frederick J. Agate of the Department of Anatomy, Dr. Werner demonstrated that pituitary tropic hormones are little, if at all, destroyed by their end-organs

and the evidence indicates that they are chiefly degraded in other sites in the body. A study of the Pennington diet by Dr. Werner revealed no difference between a high fat and a high carbohydrate diet of isocaloric content upon weight loss in obese subjects.

During the past year, Dr. Jailer, working in the laboratories of the Department of Gynecology and Obstetrics, has had the following Fellows associated with him: Dr. Jay J. Gold, a Fellow of the American Cancer Society, Dr. Raymond Vande Wiele, a Fellow of the Belgian Government, Dr. Nicholas P. Christy, a United States Public Health Service Fellow, Dr. Eleanor Z. Wallace, a Damon Runyon Fellow, Dr. Helen B. Horowitz, Fellow of the National Foundation for the Study of Infantile Paralysis, and Dr. Anne L. Davis, a Dazian Foundation Fellow. In addition, working with Dr. Jailer at the present time is Dr. Donald Longson, Fellow of the University of Manchester Medical School, England. The work done by Dr. Jailer and his associates has been supported in part by a grant from the United States Public Health Service, the Upjohn Company and Merck, Inc. Investigations have continued in the study of congenital adrenal hyperplasia with virilism. Further studies have added evidence to show that this disorder is due to an inborn error of steroidal synthesis in the adrenals of such patients. Apparently, in these adrenals the synthesis of hydrocortisone is impaired; there is an enzymatic defect which prevents the full hydroxylation of progesterone to form hydrocortisone. Consequently, the hydrocortisone precursors, 17-hydroxy-progesterone and 21-desoxy-hydrocortisone, are formed in large quantities and secreted by the adrenals. These steroids are metabolized within the body to others, some of which are androgenic and can account for the virilism so characteristic of this disease. 17-hydroxy-progesterone and 21-desoxy-hydrocortisone have been administered to patients with little or no adrenal function and the steroidal pattern obtained in the urine simulates that found in the patients with congenital adrenal hyperplasia and virilism who are untreated.

It has also been shown that the administration of cortisone is of value in differentiating patients with adrenal tumors from those with bilateral adrenal hyperplasia. Cortisone has no effect on the urinary excretion values of the 17-ketosteroids in the presence of an adrenal tumor, in most instances, whereas in bilateral adrenal hyperplasia there is usually a marked fall to levels which are essentially normal, depending upon the age and sex of the patients.

With the newer techniques available for the separation and identification of urinary steroids, several interesting phenomena have been discovered within the past year by Dr. Jailer and his co-workers. In collaboration with Dr. Seymour Lieberman of the Department of Obstetrics and Gynecology, a steroid, tetra-hydro Compound S, has been isolated from the urine of two

patients with adrenal carcinoma. This is obviously a degradation product of Compound S which has not previously been isolated from the urine. In addition, it has been shown that the body is capable of removing the hydroxy grouping at the 17th carbon, e.g., the administration of 17-hydroxy-progesterone resulted in the urinary metabolites, pregnanediol and pregnanolone. Finally, a simple method for the determination of plasma corticoids has been perfected within the past year and will soon be incorporated in the diagnostic procedures performed by the endocrine diagnostic laboratory.

The influence of dopa-decarboxylation inhibitors were studied by Dr. Marcel Goldenberg in rats using 2,5-dopa. Rat adrenal glands showed a definite lowering of catechol amine content, most likely due to inhibition of nor-epinephrine and epinephrine synthesis. On the other hand, 3,4-dopa caused an increase in the catechol amine content of the adrenal medulla. Dr. Goldenberg has developed a simple chemical diagnostic screening procedure for the recognition of patients with pheochromocytomas based on the determination of catechol amines in the urine. Dr. Hökfelt, a Rockefeller Foundation Fellow, working with Dr. Goldenberg, has studied the effect of dopa derivatives on the catechol amine content of the adrenal glands after their depletion of epinephrine by insulin hypoglycemis. Dr. Hökfelt with Miss Jane A. Heitmann, a medical student, studied by cross transfusion experiments the effect of blood from hypertensive donors on normal recipient rats and rats pre-treated with large amounts of salt. These studies have been supported by the United States Public Health Service.

Dr. Hanger and Dr. Jean Thin, a Fellow of the French National Research Council, have been investigating certain abnormalities in the blood serum associated with disturbances in immune reaction. Dr. Turner has been studying changes in blood lipid patterns as determined by paper electrophoresis in relation to coronary heart disease with support from a grant to Dr. Henry S. Simms of the Department of Biochemistry. He has also embarked on a study of the effects of certain vegetable sterols on a cholesterol esterifying enzyme in the blood.

With a grant-in-aid from the New York Heart Association, the Charles A. Frueauff Gift, and the Sidney A. Legendre Gift, Dr. René Wégria, together with Drs. Marvin R. Blumenthal and Peter Kornfeld, Fellows of the United States Public Health Service, and Dr. Heush-Hwa Wang, continued studies in experimental cardiology. Four medical students, Richard A. Elias, F. Bruce Lewis, Dudley F. Rochester and Nicholas A. Yankopoulos, participated in the work this year. In a study of the effect of acute cor pulmonale, as induced by partial compression of the pulmonary artery, on the coronary circulation it was found that the right coronary blood flow always rises unless the compression of the pulmonary artery is so extreme that the systemic arterial blood pressure decreases markedly. When cor pulmonale in-

creases the coronary sinus outflow as well as the right coronary flow, there occurs regularly an increase in the left coronary flow commensurate with the increase in sinus outflow. In a study of the possible danger of the administration of digitalis in the presence of ventricular tachycardia, it was found that in the anesthetized dog the intravenous administration of a dose of lanatoside C equal to twice the average digitalizing dose in human beings on a weight basis, does not induce ventricular fibrillation. Work is being completed on the effect of auricular tachycardia of different rates on arterial blood pressure, cardiac output, coronary flow, cardiac work, oxygen consumption and cardiac efficiency. From preliminary experiments it would seem that the decrease in cardiac efficiency observed during tachycardia is not dependent upon any deficiency of coronary flow or available oxygen except when the rates of tachycardia are very high.

In the cardiorespiratory laboratory, the late Dr. West and Dr. Alexander accumulated data on the pulmonary compliance and work of breathing in patients with pulmonary emphysema and fibrosis. These studies were supported by a grant from the Frueauff Foundation. Similar measurements are now being made by Dr. Charles W. Frank, Dr. Gerard M. Turino, a Fellow of the National Foundation for Infantile Paralysis, and Dr. John A. Wood, in patients with mitral stenosis before and after commissurotomy, correlating these data with the pulmonary blood flow and blood pressure as revealed by cardiac catheterization. Dr. Wood has analyzed a comparison of certain clinical and physiologic data obtained before and after surgery in 18 patients with mitral stenosis. This study indicates that clinical improvement is usually associated with a decrease in pulmonary hypertension and/or an increase in cardiac output. Progress has been made by Dr. Frank in the application of the isotope injection technique to the measurement of the cardiac output, with a grant from the United States Public Health Service. Several changes in instrumentation and methodology have resulted in much improved time-concentration curves, thus permitting more accurate interpretation of the records. The reliability and limitations of this method are being tested by comparison with simultaneously determined Fick outputs.

Support of Dr. Charles A. Ragan's group has been derived from the Edward Daniels Faulkner Fund, the Masonic Foundation, the New York Chapter of the Arthritis and Rheumatism Foundation, and the United States Public Health Service. Dr. Baruch S. Blumberg, a Fellow of the Arthritis and Rheumatism Foundation, is studying the biophysical properties of connective tissue mucopolysaccharides, and Dr. Arthur I. Snyder, also a Fellow, is studying the relationship between the nervous system and inflammatory processes. The group of patients with rheumatoid arthritis maintained on long-term hormonal therapy remains essentially unchanged. The disease in this group is progressing, but perhaps at a slower rate than might be ex-

pected without this treatment. Dr. David S. Howell, a trainee of the United States Public Health Service, is participating in this study. Steroids with anti-inflammatory action, other than cortisone and hydrocortisone, are being studied in clinical trials. The mechanism by which cortisone decelerates repair processes is under investigation, *in vivo* and *in vitro*. With Dr. Raffaele Lattes of the Department of Surgical Pathology, it has been found that a heat stable component of cartilage will locally overcome the *in vivo* cortisone effect, and further characterization of this component is being attempted. In tissue culture studies under Drs. Godman and Grossfeld it has been found that hydrocortisone exerts a depressing effect on fibroblastic growth and an accelerating effect on the tendency of "starved" fibroblasts to change to fat cells. In tissue culture studies using several types of mesenchymal tissue, both adult and embryonal, as starting material, the production of mucopolysaccharides has been demonstrated.

The organization of the Edward Daniels Faulkner Clinic has not been modified but clinical discussions in which fourth year medical students participate are now held once a week after the formal clinic session. Our association with the Columbia Research Division at Goldwater Memorial Hospital and the New York Orthopaedic Hospital remains close and productive.

During the past year Dr. Fischel has continued clinical and laboratory studies with aid from the Masonic Foundation for Medical Research and Human Welfare, the United States Public Health Service and the Upjohn Company. With Dr. Nordén it was shown that the fixation of complement *in vivo* in guinea pigs appears to be directly related to the amounts of antibody and antigen used to elicit anaphylaxis as in the case in *in vitro* studies. Dr. Fischel has demonstrated that the "acute phase" increase in serum complement is unrelated to the appearance of C-reactive protein, or elevation of the sedimentation rate. With Dr. Frank, Dr. Fischel studied the use of cortisone or hydrocortisone combined with salicylate in patients with rheumatic fever. On the whole, some benefit could be discerned in many patients beyond that expected with the use of a single agent, but failures of this therapeutic regimen were also encountered. Follow-up of the Cooperative Study on the Management of Rheumatic Fever continued in its fourth year. After many conferences and discussions, the analysis of the first year's experience is almost ready for publication.

Organization of a cooperative interinstitutional investigation of cancer chemotherapy screening methodology in which Dr. Alfred Gellhorn's laboratory actively participated has been a major effort during the past year. The results of this investigation have established certain important criteria for chemotherapy screening studies and have dispelled a number of misconceptions. It was demonstrated that multiple experimental tumors must be in-

cluded in a screening procedure if potentially useful compounds are not to be overlooked. The study showed that microbiological systems, embryological systems and a variety of biochemical synthetic systems could not substitute for the experimental tumor systems in cancer chemotherapy screening. This large project was supported by the American Cancer Society. Research on the polysaccharide moiety of tissue and serum proteins has been initiated with Drs. Zacharias and Renate Dische. The polysaccharide component of serum proteins fractionated according to the technique of Cohn has been done in normals, and studies of the serum proteins in patients with cancer have been started. This work is supported by the United States Public Health Service.

A research program on laboratory and clinical cancer chemotherapy, also supported by the United States Public Health Service, has as its objective the selection and trial of drugs on the basis of their intracellular localization in neoplastic cells.

A more specialized study of cancer chemotherapy is represented by research on brain tumors in mice and men. In this investigation *in vivo* and tissue culture techniques are used to select compounds and study their mechanisms of action. This is supported by the United States Public Health Service. A final clinical evaluation of adrenalectomy in carcinoma of the breast utilizing all available and known criteria for the selection and evaluation of patients is in progress, also under auspices of the United States Public Health Service.

Dr. Barach and Dr. Hylan A. Bickerman have studied the inhibition of tumor growth in mice exposed to anoxia; protection of the animals against low oxygen tensions was accomplished by artificially induced hypothyroidism and by acclimatization since tumor tissue itself was not found to benefit by the acclimatizating procedure. Studies with the use of high altitude chambers have been initiated with the collaboration of Professor Samuel Graff at the Francis Delafield Hospital. With the collaboration of Dr. Gustav J. Beck and Dr. Louis A. Scarrone, studies on exsufflation have revealed that whereas mechanically induced high expiratory flow rates are consistently effective in eliminating bronchial secretions in patients with paralyzed respiratory musculature such as poliomyelitis and myasthenia gravis, in patients with conscious control of the breathing apparatus, i.e., bronchiectasis and pulmonary emphysema, special emphasis on technique and patient cooperation may be required to achieve an effective result. Physiological and pharmacological studies by Dr. Barach and his associates, on patients with bronchial asthma and pulmonary emphysema, have resulted in additional methods of relieving the dyspnea of these cases, including the use of the spring-type Gordon-Barach Belt. These studies have been supported by the Asthma Physiological Gift and the National Foundation for Infantile Paralysis.

Dr. Joseph C. Turner and Dr. Betty S. Roof, a Fellow of the American Cancer Society, have continued their studies of the binding of certain drugs by tissues. In the whole animal evidence has been obtained of an affinity of the anti-rheumatic agent, gentisate, for connective tissue. A simpler *in vitro* system for more detailed investigations of such interactions has been sought by the use of one or another of the isolated cellular elements of the blood as the tissue component. Because of the association of quinidine with thrombopenic purpura, the system, blood platelets — quinidine, has received attention. It appears that the drug alters the electrophoretic mobility of the cells, which can now be shown to travel with the quinidine, suggesting the formation of a drug-cell complex. This approach to tissue cell-drug interactions may have significance for the problem of drug hypersensitivity. The work has been supported by a grant from the Arthritis and Rheumatism Foundation.

In collaboration with Dr. Fernando Valenzuela of Santiago, Chile, Dr. Plimpton has continued his investigation of the mechanism of cortisone osteoporosis. Using normal and rachitic rats, it appears that cortisone does not suppress the formation of matrix, and its mechanism of action is under further study. Dr. Pines is continuing studies on patients with hypercalcemia and sarcoidosis in an effort to determine the mechanism of action of cortisone on the disordered calcium metabolism. In conjunction with Dr. Bertram J. Sanger, he has used Lenta Insulin, a long-acting zinc insulin preparation, in a group of diabetic ward and clinic patients. This agent appears to be of value in patients who have allergic reactions to other depot insulins.

Dr. Kneeland and Mrs. Katherine M. Price have continued studies of encapsulated staphylococci. A large number of strains have been investigated and capsules have been demonstrated in many of them under varying conditions. Serological studies indicate that this substance is not identical with that producing type-specific agglutinins. The question whether it is a property exclusively of pathogenic strains is now under investigation. Experiments on the chemotherapy of influenza virus infections have also been continued. The investigation of alum in precipitated ragweed extract by Dr. William B. Sherman, in the treatment of patients with hay fever and with unusual susceptibility to reactions, has been continued. This product appears to offer advantages over the regular soluble extract. Dr. Flood has continued studies on problems related to hiatus hernia including the nature of the motor disorders of the esophagus associated with the effect on these disorders of operative correction of the hiatus hernia. The occurrence of esophageal reflux and esophagitis has been investigated in patients with simple heartburn. A long term study of the natural history of chronic ulcerative colitis is being continued.

A study in the Constitution Laboratory, supported by Mr. Eugene Mc-

Dermott and Mrs. Dorothy Paschal, has continued. Data are being collected by Dr. William H. Sheldon, Clinical Anthropologist, and Drs. Sylvia G. Traube and Albert Damon, Fellows of the United States Public Health Service, on patients exhibiting a number of disorders including diabetes, various forms of cancer, pituitary chromophote adenomas, peptic ulcer and otosclerosis. Studies are also being carried on among U.S. Army inductees at Fort Dix at the request of the Army. Also, a study of the somatotype of twins is being completed by Dr. Richard H. Osborne in conjunction with the Department of Biology of Columbia University, and supported by the Commonwealth Fund. Dr. Sheldon has published his Atlas of Normal Males in the past year.

Neurological Surgery

J. Lawrence Pool, m.d., *Director*

New developments in brain, nerve and spinal surgery and an increased awareness of surgically remediable disorders of the nervous system by the alert clinician, have made neurological surgery one of the fastest growing and at the same time one of the most highly specialized fields in modern medicine. Because of its complex, highly specialized character, successful neurosurgery depends on interstaff teamwork, the wide neurosurgical experience, and the necessary technical facilities provided by a well equipped Medical Center such as ours. It seems appropriate therefore to itemize some of the factors, however obvious they may be, that contribute to the exceptionally high percentage of good post-operative results enjoyed by the Service of Neurological Surgery at the Columbia-Presbyterian Medical Center.

The Service operates principally at the Neurological Institute, a unit of the Medical Center that has been established in a building devoted wholly to the diagnosis and treatment of disorders of the nervous system. In addition to the capable staff of neurologists and neurosurgeons at the Neurological Institute, a talented group of experts specialize in neurological diagnosis or treatment by means of X-ray studies and X-ray therapy, electroencephalography, neuropathology, muscle and nerve testing, other special laboratory examinations, and physiotherapy. Skillful administration of anesthesia and nursing care, the availability of specialists in other branches of medicine and surgery, and the fact that well trained resident or house staff physicians are always on duty, are other factors that make possible the high standards of patient care.

The combined effect of all of these features at the Neurological Institute permits many difficult and otherwise hazardous operations upon the brain and spinal cord to be carried out safely and successfully. Thus intracranial blood vessel surgery for aneurysms and angiomas, radical removal of benign and malignant brain and spinal tumors (with long term survival of certain cases of malignant brain tumors), and newly developed operations for pain relief, Parkinson's Disease, and epilepsy are being successfully done by various members of the staff of Neurological Surgery with gratifying regularity. In a word, the staff and facilities for neurological surgery at the Neurological Institute provide a unique opportunity for achieving good results, especially in difficult cases.

Effective new developments in neurosurgery include the use of hypothermia for intracranial blood vessel surgery in the treatment of aneurysms;

hemispherectomy or removal of the diseased half of the brain for the arrest of incurable epileptic seizures in infantile hemiparesis; the stereotaxic insertion of small intracerebral electrodes to relieve severe chronic pain; and anterior chorioidal artery ligation for the improvement of certain cases of Parkinson's Disease and hemi-ballismus.

The major need of the Service is a six-bed post-operative recovery room on the 10th floor of the Neurological Institute adjacent to the operating rooms. The attending, nursing and anesthesiology staffs are unanimous in hoping that such a recovery room will soon be available, both for the sake of more efficient patient care, and for the sake of greater economy in the face of a growing difficulty in obtaining enough specially trained nurses.

We turn now to a report on members of the Neurological Surgery attending staff during the past year. Dr. Pool has made a concerted effort to accomplish complete removal of acoustic nerve tumors through a simple vertical incision with the patient in an upright position. Thanks to a study of the electrolyte panel with Dr. Arthur F. Battista, together with an evaluation of the endocrine status by members of the Service of Medicine, patients undergoing pituitary gland surgery have been more effectively treated before and after operations than heretofore. In conjunction with Dr. Hubert L. Rosomoff, Dr. Duncan A. Holaday, Assistant Attending Anesthesiologist, and Dr. Ernest Salanitre, Assistant Anesthesiologist, hypothermia has been advantageously used for operations on intracranial aneurysms. This is a carefully controlled procedure based on considerable laboratory study by Drs. Rosomoff and Holaday. Dr. Joseph Ransohoff has also participated in this study.

Dr. Pool has also continued his interest in the treatment of carefully selected cases of Parkinson's Disease by ligation of the anterior chorioidal artery, an operation that has proved helpful in a number of cases between 35 and 55 years of age. It also appears to be a promising operation for the treatment of hemi-ballismus. A trial of stereotaxic methods of treating Parkinson's Disease is also under way in collaboration with Dr. William Kemp Clark. Also with Dr. Clark, an effort is being made to relieve the intractable suffering from cancer by stereotaxic placement of small electrodes deep in the medial portions of the frontal lobes. This procedure has led to no ill effects and has been of great value as to pain relief without euphoria in a number of patients. Part of this work is based on laboratory tests carried out at the College of Physicians and Surgeons.

Finally, a continued effort is being made to arrest the growth of glial tumors of the brain by biochemical, as well as surgical and X-ray methods of treatment. In this field, Dr. Thomas J. Bridges has been the active clinical investigator.

The following papers by Dr. Pool have been published during the year: The Visceral Brain of Man; Psychosurgery in Older People; Electrolyte

Changes Following Pituitary Surgery, with Dr. Arthur F. Battista, Dr. Abbie I. Knowlton, Assistant Attending Physician, and Dr. Robert W. Sengstaken; Analysis of 2000 Patients Having Increased Intracranial Pressure and No Localizing Signs, with Drs. Leonard Berg, Maximilian Silbermann, Neal I. Aronson and Ransohoff, and Pain Relief by Deep Frontal Lobe Stimulation with Implanted Electrodes, with Dr. Clark.

The Director of Service has participated in the following panel discussions: 1) Electrolyte Balance and Post-Operative Infections in the Neurosurgical Patient, at the Annual Meeting of the American College of Surgeons in Atlantic City; 2) Cervical Trauma, at the meeting of the Congress of Neurological Surgeons in New York City; 3) The Treatment of Headache, at the New York Academy of Medicine; and, 4) Head Injuries, given as part of a Law-Science Short Course on Legal Medicine for trial lawyers, in New York City. He has spoken on Stereotaxic Work in Man, with Dr. Clark, at the Section on Neurology and Psychiatry at the New York Academy of Medicine. This work was also presented before the Department of Neurology, Yale University.

Dr. Pool has prepared a color motion picture illustrating his operation for complete removal of acoustic nerve tumors, a film that was shown at the Annual Meeting of the Alumni Association of the Neurological Institute, December 9, 1954, as part of a talk on Total Removal of Acoustic Neurinomas; and he addressed the Phi Chi Fraternity at Bard Hall on the Scope of Neurosurgery, on October 28th. During the year, Dr. Pool also gave a lecture on Psychosurgery at the Post-Graduate Center for Psychotherapy, and has participated, with Dr. Bridges, in "Telecolor Clinics," a closed circuit color television program presented by the American Cancer Society and the Columbia Broadcasting System, entitled "Cancer of the Central Nervous System."

Dr. Pool is a member of the Board of Scientific Directors of the Yerkes Laboratories for Primate Biology, Orange Park, Florida, and the Executive and Membership Committees of the American Academy of Neurological Surgeons. He was named by Harvard University as a member of the Visiting Committees of the Museum of Comparative Zoology, and of the Psychological Laboratories.

Dr. Fritz J. Cramer has presented a paper on the Surgical Removal of Calcified Intervertebral Discs and Ridges Causing Cervical Spinal Cord Compression, before the Harvey Cushing Society, and another at the Scandinavian Neurosurgical Society meeting in Gothenburg, Sweden, on the Total Removal of Ependymomas of the Cauda Equina. In October, 1954, he became a corresponding member of the Scandinavian Neurosurgical Society.

Dr. Lester A. Mount has carried out the following research projects during the year: Aneurysm registry; A study of patients with spontaneous subarach-

noid hemorrhage and the treatment of intracranial aneurysms; Further study of collateral circulation of the brain following carotid ligation; The continuation of a long term study of patients with premature synostosis of the sutures of the cranial vault; and the study of blood pressure in the internal carotid artery and arteries of the brain following carotid occlusions in the neck. Dr. Mount was elected President of the New York Society for Neurosurgery for 1954-1956, and has presented the following papers: A radio presentation on Brain Tumors under the auspices of the Medical Society of the County of New York; discussion of Dr. Groff's paper on Experiences with Surgical Treatment of Intracranial Aneurysms at the joint meeting of the Philadelphia and New York Neurological Societies; Collateral Circulation of the Brain Following Ligation of the Internal Carotid Artery in the Neck, presented at the Harvey Cushing Society meeting, May 1954; Intracranial Aneurysms, presented at the Queens County Neurology and Psychiatric Division, June 1954; The Value of Radiation Therapy in the Management of Gliomas of the Optic Nerves and Chiasm, with Dr. Ernest Wood and Dr. Juan M. Taveras, Assistant Attending Radiologist, at the Mackinac Island meeting of the Neurosurgical Society of America, July 1954; and Herniation of Cervical Intervertebral Discs, given at the Mount Kisco Medical Group, December 1954. He was a panel member at the meeting of the Congress of Neurological Surgeons on "Cervical Injury," November 1954.

Dr. Edward B. Schlesinger has been engaged in the following research projects during the year: A study of muscle relaxants, financed by a grant from Carter Products; The mechanism of cerebral edema and its control by drugs; The effects of varying amounts of radiation on permeability of cerebral vessels, with Dr. Roberts Rugh, Associate Professor of Radiology; The development of a technique for extracranial localization with radio-isotopes, with Dr. Taveras and Dr. Harald H. Rossi, Associate Professor of Radiology; and an attempt to obtain a correlation between serum phosphatase activity and meningioma phosphatase.

He has given the following papers: Clinical Physiology of Muscle, at the Post-graduate Seminar in Dentistry, May 1954; The Cardiovascular Effects of Arteriovenous Fistulas Above and Below the Heart, American Neurological Association, June 1954; and The Relationship Between Carotid Thrombosis and Cerebral Atrophy, American Neurological Association. He took part in a panel discussion on Injuries to Cranial Nerves at the Law-Science Institute, July 1954; and another on Shoulder-Arm Injuries at the meeting of the American College of Surgeons, November 1954; and also gave a paper on Diagnosis and Indications for Surgery in Disc Disease at the meeting of the American Congress of Physical Medicine, Washington, D.C., September 1954. A survey chapter on Surgery of Parkinson's Disease for Dr. Louis J. Doshay, Assistant Attending Neurologist, has also been contributed.

Dr. Schlesinger has been Chairman of the Program Committee, New York Neurosurgical Society; a member of the Planning Committee of the Nerosurgical Society of America; a member of the Executive Committee of the Coordinating Council for Cerebral Palsy; a member of the New York-Brooklyn Committee on Trauma; and has been appointed Attending Neurological Surgeon at the White Plains Hospital. He is a member of the Panel of Experts and Consultants, Supreme Court of New York, and is Secretary of the Neurological Institute Alumni Association.

Dr. Ransohoff has given eleven papers or discussions during the year: five on head injuries, two on headaches, and one each on the neurosurgical treatment of hydrocephalus, painful states, and, with Dr. Sidney Carter, Attending Neurologist, the treatment of convulsive seizures due to infantile hemiplegia by hemispherectomy. He has published an article on Ventriculo-Pleural Anastomosis in the Treatment of Midline Obstructional Neoplasms; and another, with Dr. Silbermann, on Medico-Legal Problems in Psychosurgery. In addition to this Dr. Ransohoff prepared an exhibit on the Treatment of Hydrocephalus; participated in a television program entitled Search for Sanity; and served as an associate host for the Congress of Neurological Surgeons at their Annual Meeting in October 1954. He has been actively engaged in research in psychosurgery at the New York State Psychiatric Institute and Hospital, and is collaborating in a study of cerebrospinal fluid production by means of radioactive tracers at the Neurological Institute, with Dr. Robert A. Fishman, Assistant Neurologist. He has been reappointed as Neurosurgical Consultant at five hospitals in or near New York City.

Dr. James B. Campbell has presented a paper on the Stereotaxic Placement of Radioactive Material for the Production of Quantitated Lesions in the Brains of Laboratory Animals, at the Harvey Cushing Society meeting, May 1954; at the Scandinavian Neurosurgical Society in Gothenburg, Sweden, in September 1954; and at the American College of Surgeons Annual Meeting in Atlantic City, November 1954.

Dr. Campbell has continued his research activities in the neurosurgical laboratory relative to the use of discrete radioactive material in the nervous system oriented toward eventual use on a clinical level. This work was done in close collaboration with Dr. Gioacchino Failla, Professor of Radiology, and Dr. Rossi of the Department of Radiology. Dr. Campbell has continued his careful studies of bladder innervation, supported by the United Cerebral Palsy Association, and the Office of the Surgeon General of the Army. His radioactive project is supported by a grant from the Eli Lilly Company and the Veterans Administration. During the year, Dr. Campbell accepted an Affiliate Fellowship in the Surgical Section of the American Academy of Pediatrics and an appointment at the Brookhaven National Laboratories as a Research Collaborator in the Medical Department.

Dr. Bridges, with Dr. Clark and Dr. Daniel M. Shapiro, Senior Resident in Surgery, has developed a technique for continuous intra-carotid administration of an anti-metabolite drug (azoguanazola) as a possible method of treatment of glioblastoma multiforme. Of the five patients so treated, temporary improvement was noted in three. With Dr. Melvin D. Yahr, Associate Attending Neurologist, Dr. Bridges has completed a study of cerebral plethysmography. He also presented a paper on Circulatory Changes Secondary to Dorsal Root Stimulation, at the Annual Meeting of the Alumni Association of the Neurological Institute.

Dr. Ransohoff has been made Chief of operating room techniques and Dr. Schlesinger has been appointed Chief of the Neurosurgical Clinic, while Dr. Mount will be in charge of the Resident Teaching Program. These appointments are made in accordance with our rotation system for such positions.

During the year 50 neurosurgeons visited the Neurological Institute: 32 from this country, 4 from South America, 8 from Europe, 2 from Australia, 2 from Canada, 1 from New Zealand and 1 from Formosa. Several of our visitors came for the express purpose of studying and observing new procedures in our neurosurgical operating rooms, while a number of neurosurgical nurses from other clinics also visited us to study our techniques.

Activity on the part of our exceptionally fine staff of resident neurosurgeons has been particularly gratifying during the past year. Dr. Arthur F. Battista has written a paper dealing with the electrolyte changes that may follow pituitary gland surgery. Of the Assistant Residents, Dr. Frank M. Hudson has made an extensive survey of the craniopharyngioma cases treated at the Neurological Institute during the past twenty years. Dr. Dominick P. Purpura has presented his work on Further Analysis of the Secondary Discharge: A study in retriculo-cortical relations, at the American Physiological Society meeting, Atlantic City, April 1954; while Dr. Rosomoff's talk on Cerebral Blood Flow and Cerebral Oxygen Consumption during Hypothermia, given at Madison, Wisconsin, at the meeting of the American Physiological Society, September 1954, was singled out as one of the most significant presented at the meeting. Dr. Rosomoff is now preparing a paper on the Clinical Use of Hypothermia in Intracranial Blood Vessel Surgery. Dr. Clark, as stated elsewhere in this report, has collaborated on papers and addresses dealing with stereotaxic procedures for the relief of pain and certain other chronic diseases. Dr. Joseph W. Robertson is participating with Dr. Taveras and Dr. Pool in a study of optimal methods of treating tumors of the pituitary gland.

Dr. Arthur A. Pava has collaborated with Dr. Pool on a survey of 112 cases of acoustic nerve tumors operated upon at the Neurological Institute during the past ten years. Dr. Edward C. Ryan is at work on a post-operative study of patients who had suffered intracerebral hematomas, while Dr.

William B. Kintzing, Visiting Fellow, is completing a report on the surgical treatment of cysts of the septum pellucidum.

At this juncture we should like to thank most warmly the individual donors and foundations who have made possible our clinical and laboratory research efforts through their generosity and interest. Some of this work has already proved of great practical value, with promise of further practical, as well as theoretical applications to come. Special thanks are extended to the several contributors who helped our research efforts this year by generous gifts on short notice at a most critical moment. To Mr. Paul Moore, we are especially indebted for making it possible to pursue an extensive investigation of the basic mechanisms and therapy of obscure types of neuritis. This work will be a joint venture with the Service and Department of Neurology.

In concluding this report, the fullest appreciation and gratitude is extended by the staff of Neurological Surgery to fellow members of the Columbia-Presbyterian Medical Center staffs, who have helped make the work of our Service both pleasant and effective. To Miss Margaret Eliot, Director, Nursing Service; Miss Beatrice Langmuir, Assistant Director of Nursing in charge of operating rooms; Mrs. Helen C. Delabarre, Miss Martha Haber, Miss Evelean Pierce, Operating Room Supervisor at the Neurological Institute; Miss Cecile Covell, Assistant Director of Nursing at the Neurological Institute, and the entire staff of loyal, efficient nurses, we extend special thanks.

To Dr. Emanuel M. Papper, Director of the Anesthesiology Service, and his well trained staff, we are grateful for their superlative results in anesthesiology. Dr. Abner Wolf, Attending Neuropathologist, Dr. David Cowan, Associate Attending Neuropathologist, Dr. Taveras, Dr. Paul F. A. Hoefer, Associate Attending Neurologist, and Dr. Eli S. Goldensohn, Assistant Attending Neurologist, have also shown splendid cooperation of a most helpful kind at all times. To all the specialists in other fields at the Medical Center gratitude is also expressed, especially to those with whom we work so closely, namely those from the Orthopedic, Pediatric, Medical, Psychiatric, Otolaryngological and Ophthalmological Services.

The constant kindly interest of Mr. Charles P. Cooper, President, our new Vice-President, Mr. Alvin J. Binkert, and all other administrative officers has been particularly welcome. To Dean Willard C. Rappleye we are of course forever grateful for his wise counsel and guidance.

Last but not least we wish to extend our continued esteem to Dr. H. Houston Merritt, Director of the Service of Neurology, and his staff of able and distinguished neurologists, with whom it is such a pleasure to work.

Neurology

H. Houston Merritt m.d., *Director.*

The number of patients treated on the Neurological Service during 1954 was at the high level of previous years. In addition to the regular complement of residents, the Service afforded training for several fellows sponsored by the United States Public Health Service and the National Foundation for Infantile Paralysis. Dr. Christian Herrmann, Jr., Fellow of the United States Public Health Service, resigned in July to accept an appointment as Assistant Professor of Neurology at the new medical school of the University of California at Los Angeles. The Service takes pride in the fact that the caliber of training at the Neurological Institute prepares our younger men for positions of responsibility in the various university hospitals throughout the United States.

There were no retirements on the Service during the past year. We announce with deep regret the deaths of Dr. James L. Joughin and Dr. Earl C. Chesher. Dr. Joughin was a member of the staff of the Neurological Institute at the time it joined the Medical Center, and served for many years as Chairman of the House Staff Committee until his retirement from active duty and appointment as Consultant. Dr. Chesher faithfully served the Hospital for many years and was especially effective in fostering the relationships between the Neurological Service and the other units of the Hospital.

The members of the resident staff were particularly active in clinical research. Drs. Joseph Marotta and Charles M. Poser presented to the American Neurological Association the results of their study of the intracranial pressure in patients with tumors of the brain. Dr. James H. Austin made a thorough study of several members of a family with chronic interstitial neuritis. Drs. Poser and Faith C. Walsh, in collaboration with Dr. Sidney Carter, have investigated the neurological complications of infectious mononucleosis in children. Dr. Poser, in collaboration with Drs. Abner Wolf, Professor of Neuropathology, and Eleanor Roverud, presented a study of amyoplasia congenita at the annual meeting of the American Neuropathological Association. Dr. William A. Sibley published the results of his investigation on febrile convulsions in kittens. Drs. Lowell G. Lubic, Melvin D. Yahr and Nicholas P. Christy of the Department of Medicine, published an article on thrombosis of the innominate artery.

Dr. William Amols, working under a grant from the Smith, Kline and French Company to the Medical School, continued his studies on drugs which affect cerebral activity. Thorazine, which was mentioned in our previ-

ous report, has proven to be an effective anti-emetic and gives promise of being a valuable agent in the therapy of some forms of mental diseases.

Dr. Paul F. A. Hoefer returned from his sabbatical leave on April 1, 1954, and the permanent professional personnel of the electroencephalographic laboratory now consists of Dr. Hoefer, Dr. Eli S. Goldensohn, and Mr. Leonard Zablow, physicist. Dr. E. Gardner Jacobs and Dr. Stanley M. Ball hold Research Fellowships for a year and work full time in the laboratory. In addition, Dr. Lutz Rosenkoetter of the Free University of Berlin, a Ford Foundation Research Fellow, is working in the laboratory for six months.

The number of clinical procedures performed in the combined electroencephalographic laboratories at the Neurological Institute and the Presbyterian Hospital between December 1, 1953, and December 1, 1954, was 5,415; 3,636 tests being performed at the Neurological Institute and 1,779 at the Presbyterian Hospital.

Dr. Sidney M. Cohen continues his research work on basic problems of the epileptic discharge as recorded with microelectrodes from the cerebral cortex. It is expected that this study will have some bearing on the surgical treatment of convulsive disorders. Dr. Hoefer and Dr. Hermann finished an analysis of muscle innervation as reflected in the electromyogram, using normal subjects and patients suffering from various types of muscular dystrophy. Dr. Hoefer, with Dr. Labe C. Scheinberg, is preparing a report on clinical and electroencephalographic findings in patients with migraine. Drs. Goldensohn and Ball, working in conjunction with the Departments of Psychiatry and Neurosurgery, are studying the effects on brain physiology of hallucinogenic drugs in man and experimental animals. Drs. Goldensohn and Jacobs are investigating the central control of respiratory activity from medial basal cortical and subcortical structures. Dr. Goldensohn and Mr. Zablow are developing an electronic recording equipment for the measurement of respiratory movements without interfering with chest movement or air flow.

Dr. Carter, in association with Dr. Joseph Ransohoff of the Neurological Surgery Service, reported to the Association for Research in Nervous and Mental Disease on the effect of removal of one entire hemisphere from the brains of children with infantile hemiplegia and convulsions. They found that the convulsive seizures ceased or were more readily controlled after the operation. The behavior of the patients was greatly improved, and the paralysis not adversely affected by removal of the diseased hemisphere.

The Adult Epilepsy Clinic, conducted by Drs. Daniel Sciarra, Carter, Frederic T. Zimmerman and Yahr, continues to treat a large number of patients. New anti-convulsant drugs are being tested in the search for a more effective method of regulating the disorder of the cerebral cortex responsible for convulsive seizures.

Dr. Lewis J. Doshay continues his activities in the special clinic for the treatment of patients with paralysis agitans, with particular emphasis on the testing of new modes of medical therapy. Dr. Doshay is collaborating with Dr. J. Lawrence Pool in the study of the effect of ligation of the anterior choroidal artery on the symptoms in selected patients who have not responded to the medical therapy. The results of this operation have been favorable in some cases, but it is not considered to be a satisfactory answer to the problem.

The clinic for children with convulsive disorders under the direction of Dr. William F. Caveness has expanded its activities as a result of a subsidy by the Variety Club Foundation to Combat Epilepsy. Dr. Caveness, in collaboration with Drs. Jean P. Davis, James Watson, Zira DeFries and Melvin B. Robbins, is making a careful analysis of the convulsive phenomena in childhood and the effects of chemotherapy and psychotherapy on the clinical manifestations. Dr. Caveness is continuing studies on the abnormalities in the electrical activity of the cortex in sleep in patients with convulsive seizures and the relationship of these abnormalities to the occurrence of the seizures. Dr. Caveness is also continuing the clinical and electrographic study of veterans of the Korean War with traumatic injuries to the brain.

Work in the immunochemical laboratories has continued under the direction of Dr. Elvin A. Kabat, Professor of Microbiology. Investigations are under way to determine the dimensions of the combining sites of human antibody to dextran. Miss Ada E. Bezer and Dr. Kabat have been carrying out an investigation to determine the lowest molecular weight dextran which is antigenic in humans. A series of dextran fractions of varying but known molecular weights have been prepared for the National Research Council by Commercial Solvents Corporation, and it is these fractions which are being used for the study. This work is of importance in relation to the use of dextran as a plasma expander.

Dr. Frederic C. McDuffie is studying immunochemical specificity relationships among human antibodies and gamma globulins. This work may lead to new reagents capable of detecting different isoantibodies and may lead to the determination of different kinds of gamma globulins in spinal fluid. Mr. Charles Petersen is continuing the routine determination of gamma globulin in cerebrospinal fluid. In addition, the method has been used for the determination of gamma globulin in serum and has proven of help in studying cases with agammaglobulinemia. Continuous evaluation and correlation of the spinal fluid gamma globulin findings with the clinical picture is being carried out by Dr. Yahr.

Mr. Peter Allen has completed a study of specificity relationships among dextrans and Dr. Mary E. Carsten, Research Fellow, is carrying out quantitative amino acid analyses on the blood group substances. Dr. Kabat has

been reappointed to the Panel on Plasma of the National Research Council and is a member of the Medical Advisory Board of the National Multiple Sclerosis Society and the Scientific and Educational Council of the American Foundation for Allergic Diseases. Studies in the immunochemical laboratories are being carried out under contract with the Medical School from the Office of Naval Research under grants to the Medical School from United Cerebral Palsy and the William J. Matheson Commission.

The research of the members of the Neurological Service was supported by grants to the Hospital from the Association for Aid of Crippled Children, the Benjamin Rosenthal Foundation and the Variety Club Foundation of New York City; and grants to the Medical School from the Benrus Foundation, Ciba Pharmaceutical Products, Eli Lilly and Company, E. R. Squibb and Sons, Lederle Laboratories, the Maltbie Company, Merck and Company, the National Muscular Dystrophy Association, Parke Davis Company, Smith, Kline and French Company, the Teagle Foundation, the United Cerebral Palsy Association, the United States Public Health Service, the Upjohn Company, Warner-Hudnut Company, and the Wynelite Company.

Among the distinguished visitors to the Neurological Institute during the year were: Dr. Franciscus Banches, Caracas, Venezuela; Dr. G. Baumgarten, El Salvador; Dr. Juan Cardenas, Mexico City, Mexico; Dr. I. Lopez Ibor, Madrid, Spain; Dr. Jan Jansen, Oslo, Norway; Dr. Eric Kugelberg, Stockholm, Sweden; Dr. Rui Cavellio Maia, Lisbon, Portugal; Dr. Shigeo Okinaka, Tokyo, Japan; Dr. G. R. Palsmo, El Salvador; Dr. J. M. Ruis, Caracas, Venezuela; Dr. John Walton, Newcastle upon Tyne, England; and Dr. G. Reyes Zumeta, Caracas, Venezuela.

The Neurological Institute was host to its Alumni on December 9th. A program illustrating the various research activities of the members of the Neurological and Neurological Surgery staffs was presented during the day, and a banquet was held in the evening. Approximately 100 Alumni were present at the banquet with Dr. Lawrence C. Kolb, the new Director of Psychiatric Service, as the guest speaker.

The Neurological Service was again host to the American Board of Psychiatry and Neurology for its examination in December. Approximately 300 candidates were examined.

The Neurological Institute has several unmet needs which promise to be solved within the next year. When the Neurological Institute was built, no facilities were provided for clinical research and the space allotted to the X-ray Department has become inadequate to meet the demands imposed on it by the increased volume of work and the intricacy of the new diagnostic techniques. The Planning Committee of the Hospital is considering certain rearrangements within the Neurological Institute which will give the X-ray Department adequate space and will make available a number of rooms

which can be used for the study by biochemical method of certain diseases of the nervous system, which have been labeled degenerative or heredo-degenerative, but which are in all probability due to some metabolic defect.

The needs of the Medical Center for the care of patients who became mentally ill in the course of their illnesses while on the wards of the Hospital have been met by the opening of facilities in the Psychiatric Institute by the new Director, Dr. Kolb, but there is still a need for facilities to treat a limited number of private patients with mental illnesses, which is being studied.

It gives me great pleasure to express my thanks to the entire staff for their sincere cooperation throughout the year. Especial thanks are extended to the administrative and nursing staffs of the Hospital for their invaluable assistance. We are particularly indebted to Dr. J. Lawrence Pool and the staff of the Service of Neurological Surgery for their fine spirit of cooperation in the care of patients and the instruction of the resident staff of the Neurological Service. We also wish to again express our thanks to Dr. Robert F. Loeb and Dr. Rustin McIntosh for their invaluable assistance. The assignment of residents to the Neurological Service by the Medical and Pediatric Services continues to be a great stimulus to the work of the Neurological Service.

Nursing

MARGARET ELIOT, R.N., *Director*

During the past year the Nursing Service has made a great effort to satisfy the increasing need for individual nursing of the seriously ill patients. A committee is studying ways and means to extend group nursing to meet this situation more adequately. The total average of graduate staff nurses numbered about the same, 462, during the years of 1953 and 1954, and the turnover in the 464 authorized positions in this group was 36 per cent for 1953, and 33 per cent for 1954. At the present time there are about 105 practical nurses.

One week of demonstrations was arranged by the Graduate Staff Committee during February for staff nurses and private duty nurses, showing some of the newer advances in the nursing of medical and surgical conditions. We were gratified to have these meetings attended by 218 nurses, mostly recent additions to our staff. Beside this our regular monthly in-service programs included films covering many aspects of nursing, together with trips to certain parts of the Medical Center.

As the in-service classes and programs for nurses' aides continue this group grows increasingly useful. These aides, numbering 230, have made a very definite contribution to the Nursing Service under Miss Lillian Oring's leadership. One series of similar classes has been given for the volunteer nurses' aides and Miss Angela J. Del Vecchio, an instructor in the Department of Nursing, has taken the responsibility for this.

Last March, Miss Marion J. Wright came from Harper Hospital, Detroit, to discuss a plan which she had worked out there. She reported this plan under the title, "The Improvement of Patient Care." It is based on the view that each individual comprising the hospital staff contributes to that care. Nearly all the departments of the Presbyterian Hospital were represented at Miss Wright's talk.

In connection with Columbia University's bicentennial celebration a conference entitled "A Century of Progress in Nursing," was arranged jointly by the Division of Nursing Education, Teachers College, and the Department of Nursing of the Faculty of Medicine. This conference also marked the 100th anniversary of Florence Nightingale's work in the Crimea. Among those giving papers were Miss Margaret Eliot, Miss Marjorie Peto, Miss Marion D. Cleveland and Miss Dorothy E. Reilly.

The graduation exercises for the members of the Class of 1954 were held in the Hospital garden with the Pauline A. Hartford Memorial Chapel as a

background. We were very pleased to have the President of Columbia University, Dr. Grayson Kirk, address the 86 graduating students, their families and friends. Dr. Aura E. Severinghaus, Associate Dean and Secretary of the Faculty of Medicine, gave the introductory remarks. The usual reception was held in Maxwell Hall following the ceremony and the "pinning on of the pins."

We were delighted to welcome back Miss Bernice R. Derby in May, after a leave of absence for illness. Mrs. Helen T. Smith retired from her position in the Institute of Ophthalmology on June 1, 1954. She has always been most faithful and very intelligent in her work and we shall miss her. Mrs. Ann Hayward was appointed to fill the vacancy. In July Miss Florence C. Barends resigned from the staff of the Nursing Service, and Miss Mary E. Windrow was appointed as an assistant in the Nursing Office to fill this vacancy.

Delegates from the Nursing Service have represented us at several institutes and conventions. The Misses Windrow, Grace M. Robles and Louisa M. Kent attended the American Nurses' Association convention in Chicago during April. The Institute on Hospital Nursing Service for head nurses and assistant head nurses given in New York last spring, sponsored by The United Hospital Fund of New York, the Greater New York Hospital Association, the New York City League of Nursing Education and the New York State Nurses' Association, was attended by nine of the head nurses. A similar institute and workshop on nursing service was held this fall and five more head nurses participated and enjoyed the discussions. Mrs. Meta Dugan represented us at the practical nurse meetings in New York. The New York State Nurses' Association convention, held at the Hotel Roosevelt in September, was also attended by several of the Nursing Service. In December Miss Lottie M. Morrison, Miss Margaret A. Hogan, Miss Dorothy M. Robinson and Miss Elizabeth A. Schreier attended the Congress on Obstetrics in Chicago.

It has been a pleasure during the year to have visits from many nurses of international importance. Among these were: the Misses Greta Dahlstrom, Matron of the Caroline Hospital, and Gunnell Claeson of the Red Cross School of Nursing, both from Stockholm, Sweden; Miss Boon Ruen Sukumarabanthu of Thailand; Miss Aurora Costa, Director of a government school of nursing, Rio de Janeiro, Brazil; the Misses Jemina C. Carter, Matron of The Maternity Hospital, Carlisle; Elizabeth M. G. Watt, Assistant Matron of Western General Hospital, Edinburgh; Arista M. Matthias and Dorothy Biddle, Florence Nightingale Scholarship winners, from Great Britain; the Misses Marie Odgaard, Assistant Director of Bisberg Hospital, Copenhagen; and Else Mahrt-Olsen also from Denmark; Miss Leonie Roenen of City Hospital-St. Pierre, Brussels, Belgium; and Miss Aurora Gysler from Geneva, Switzerland.

We have had the added pleasure of having Miss Yvonne Hentsch, Director

of the Nursing Bureau of the League of Red Cross Societies, Geneva, Switzerland, staying with us at Maxwell Hall during her year of study in the Division of Nursing Education at Teachers College. Miss Hentsch is the recipient of the Anna C. Maxwell Fellowship for 1954.

It is with great sadness that the Nursing Department records the death of Mr. John S. Parke on August 13, 1954. Always ready to listen to our requests, his understanding of our problems was very real and reassuring. The Nursing Service was privileged to make a contribution toward the memorial fund for an endowed bed in his name.

We all welcome Mr. Binkert to his new position for which he is so well fitted.

The trustees and administration have again helped us by increasing certain wage scales which affect the nurses' aides and we want them to know of our appreciation.

The Nursing Committee has met as usual during the year. The Chairman, Mr. W. E. S. Griswold, Jr., accepted with regret the resignations of Mrs. Byron Stookey and Mrs. Staunton Williams. We shall miss them and the Committee hopes they will always continue their interest.

We are again indebted to Mrs. Earl Harkness for her interest in Maxwell Hall and to her artistic ability in redecorating the dining room. Maxwell Hall has been entirely screened which makes for a great amount of added comfort during the summer months.

As always the thanks of the Nursing Service go to the President, the Board of Trustees and the administration for their loyal and untiring support; to the professional staff for their many kindnesses and help; and to the nursing staff for its sincere and constant cooperation.

Obstetrics and Gynecology

Howard C. Taylor, Jr., m.d., *Director*

The program of undergraduate teaching has been the subject receiving the chief attention on the Obstetrical and Gynecological Service during the last year. Changes were made in an effort to solve a number of problems inherent in the instruction of a surgical branch of medicine where it is necessary to place dependence on teachers who have of necessity simultaneous responsibility for the care of patients often requiring emergency attention. The objective of the new plan is to supply some continuity of personnel in instruction while preserving a degree of flexibility for physicians engaged in the care of obstetrical and gynecological patients.

For many years the Obstetrical and Gynecological staff has been divided into three groups: one assigned to the obstetrical division, one to the gynecological division and one to the out-patient department, with a rotation of each staff member through these different functions at regular intervals. The student schedules were somewhat similar, but the assignments of the staff and students were not synchronized, and there was a tendency for the student to meet a different instructor each day.

The system has now been modified so that a particular member of the senior teaching staff meets the ward, labor room and out-patient student sections for an hour every day thus providing responsible personal supervision not previously attained. At the same time all other members of the attending staff are assigned a weekly duty of one and one-half days devoted to clinical supervision of the ward and clinic patients, and to student instruction. The new system, inaugurated on October first of this year, appears to be providing a much more systematic coverage of clinical responsibilities as well as a more precise plan of student instruction.

The completion of the type of organization that has been planned still requires the addition to the staff of two full-time obstetricians and gynecologists who would have a particular responsibility for clinical investigation. The difficulty of finding qualified individuals who wish an academic career in this branch of medicine remains an obstacle.

The staff organization of the Service has continued to include a close relationship with the Gynecological Service at The Francis Delafield Hospital. The visiting staff in gynecology in that hospital consists of five men who are simultaneously active in The Sloane Hospital. Of the four members of the resident gynecological staff at Delafield, two are individuals temporarily assigned from the resident program at The Presbyterian Hospital. This ar-

rangement makes possible a consistent clinical approach to the treatment of gynecologic cancer throughout the Medical Center and has greatly facilitated the solution of certain practical problems such as the interchange of records and, when necessary, the transfer of patients from one institution to the other.

CLINICAL REPORT

The Service has regretfully to report the end of its good fortune in having temporarily banished maternal mortality from the wards and private pavilion of The Sloane Hospital. It will be remembered that in the years 1952 and 1953 there were no maternal losses, an unusual if not quite unprecedented record in modern obstetrical services. Before noting the misfortunes of the year, it should be recalled that a "maternal death" is the loss of a pregnant woman from any cause, regardless of whether this is primarily obstetrical, and the loss of any puerperal woman during the first sixty days after her delivery. The first loss during the last year was a cardiac death in a pregnant woman suffering from chronic rheumatic heart disease. The second was from "amniotic fluid embolus," a rare cause of sudden death, only recently recognized and due apparently to the entry into the maternal circulation of quantities of amniotic fluid, the liquid material with which the fetus is surrounded in the uterus. The final case was one of sepsis, first seen after her admission to the Hospital in a dying condition some days or weeks after an abortion. The record of three deaths among 4,224 delivered patients which includes 375 non-viable deliveries is not far from the average for the country as a whole this year.

CLINICAL STATISTICS

The data on the work of the Obstetrical Service, as given in the following tables, show that during the last year there were more deliveries than ever before in the history of the Hospital. The total figure, however, can be broken down to show a moderate increase in the number of ward deliveries and a slight decrease in both semi-private and private categories. The ward increase is probably a reflection of a slightly more liberal policy in the acceptance of applicants in the clinic for registration for delivery. The slight decrease in the private and semi-private categories may probably all be explained by the departure of one or two members of the attending staff to accept positions of importance elsewhere.

The fetal mortality remained relatively low, the losses being 17.9 per 1,000 on the private and semi-private and 24.9 per 1,000 on the ward services, respectively.

The total number of gynecological operations was down slightly from the 1953 figure, the decrease being entirely on the private service.

I. Viable Deliveries

	1941-1950 (average)	1951	1952	1953	1954
Ward	1,850	2,231	2,285	2,328	2,515
Semi-Private	610	731	858	883	833
Private	650	636	553	557	501
Total	3,110	3,598	3,696	3,768	3,849

II. Fetal Mortality

	1941-1950 (average)	1951	1952	1953	1954
Ward	37.3/M	25.9/M	29.3/M	17.4/M	24.9/M
Semi-private & private (/M per 1,000 viable births)	25.4/M	22.7/M	22.7/M	22.2/M	17.9/M

III. Gynecological Operations

	1941-1950 (average)	1951	1952	1953	1954
Ward	697	892	818	899	906
Semi-Private	175	279	359	544	554
Private	443	609	613	457	408
Total	1,315	1,780	1,790	1,900	1,868

RESEARCH ACTIVITIES

In describing the research activities of the Service, it is to be noted that the great majority of these concern clinical problems, the patients being in The Presbyterian Hospital and the laboratory facilities in the College of Physicians and Surgeons. In many, although not in all of these, the particular financial support for the laboratory determinations has been made through Columbia University. Appreciation for this support should be expressed to the United States Public Health Service, the American Cancer Society, the United Cerebral Palsy Foundation, the Damon Runyon Memorial Fund, the Merck, the Ortho and the Upjohn Companies, to the Banbury Fund and the MacMillin Fund of The Presbyterian Hospital.

For possible value in following the research program during successive years of the Annual Report, the same headings will be used as in previous years:

Problems of Fertility and Endocrinology

The principal approach to this general subject has continued to be the study of the chemistry and metabolism of the steroid hormones. Dr. Joseph

W. Jailer, with the assistance of seven Fellows, has continued his studies on the relationship of the adrenals to reproductive function and the development of certain secondary sex characteristics. In congenital adrenal hyperplasia with virilism, there is now evidence that there is an enzymatic defect which prevents the full hydroxylation of progesterone to form hydrocortisone. As a result of this defect, it appears that certain unusual steroids are formed in the body which are "androgenic," i.e., have a masculinizing effect and that on this account virilism develops. Evidence that administration of cortisone can serve to differentiate patients with adrenal tumors from those of adrenal hyperplasia has continued to accumulate. In Dr. Jailer's laboratory also, during the last year, there has been developed a simple method for the determination of plasma corticoids, another group of steroid substances of great physiological significance. This test shows such promise that it will be soon incorporated as a routine diagnostic procedure in the endocrine diagnostic laboratory.

Seymour Lieberman, Ph.D., Associate Professor of Biochemistry, with his group has continued the investigation of the chemistry of the urinary steroids and has been applying newer methods to the study of certain problems in reproductive physiology and in cancer. Reference may be made particularly to the biosynthesis of steroid hormones by means of the profusion of isolated glands, including adrenals, ovaries, testes and placenta with materials labelled with radioactive-carbon. In his work, Dr. Lieberman has been assisted by Jean Pierre Rosselet, Ph.D., Ulrich Weiss, Ph.D., Samuel Solomon, Ph.D., and others.

The physiology of the endometrium, i.e., the lining membrane of the uterus, has been under investigation by Earl T. Engle, Ph.D., Professor of Anatomy, who, in association with two visiting fellows, has been studying the pattern of the blood vessels in relation to pathological uterine bleeding and the cytochemical characteristics of the endometrium in fertile women. Dr. Equinn W. Munnell and Dr. Ferdinand H. Flick have been reviewing from a clinical standpoint cases of abnormal bleeding. Dr. Anna L. Southam has continued her work in charge of the endocrine and sterility clinic and is engaged in an exhaustive review of the records of cases treated for infertility over a period of the last few years.

Studies of gynecologic pain of undetermined origin are being made by a combination of psychiatric and physiologic examinations. Dr. Lothar Gidro-Frank, Assistant Attending Psychiatrist, in association with Miss Thelma Gordon, is studying the psychiatric and psychological aspects of such patients with a control group regarded as normal in the prenatal clinic. Correlated with this study is an examination of the pelvic blood flow being conducted by Dr. Landrum B. Shettles and Dr. Flick. The latter study depends on two methods, one the time required for the disappearance of radioactive

sodium injected into the cervix, the other upon an instrument placed within the uterus to measure thermo-conductance. The possibility of correlating psychological factors with these measurable physiological changes seems very great.

The Physiology of Pregnancy

A number of different fields of research are under investigation in relation to pregnancy. Dr. Albert A. Plentl has continued his work on the origin and fate of the amniotic fluid which is being carried out simultaneously on experimental animals and on certain ward patients. The investigation, depending on the use of a number of different tracer substances will, it is believed, reveal the mechanism by which the amniotic fluid is transferred between the respective compartments of mother, fetus and amniotic cavity. The investigation promises important practical results, at least in the explanation of the clinical condition termed "hydramnios" which is characterized by an excessive collection of amniotic fluid. Dr. Plentl and his group have published seven papers during the course of last year, and two more are in press.

With regard to steroids, Dr. Lieberman and his group are continuing to work on the nature of the corticoids excreted during pregnancy, on the nature of the 17-Ketosteroids excreted and, as already noted, on the substances produced by profusion of the isolated placenta with various radioactive-carbon labelled materials.

Dr. Charles M. Steer is the member of the Service collaborating on a study of the relationship of blood-group incompatibility to abortion and to cerebral palsy. This is a joint study of the Department of Pediatrics, the Ortho Foundation in Raritan, New Jersey, and the Institute for the Study of Human Variation in Columbia University, and is supported by a grant from the United Cerebral Palsy Foundation.

Reference has been made to a death occurring on the clinical service from "an amniotic fluid embolus." This condition appears to be related to a number of disorders of the blood-clotting mechanism, including excessive hemorrhage, which may occur towards the end or immediately after labor. Louise L. Phillips, Ph.D., Research Associate, is engaged in the study of two elements in the blood-clotting mechanism, fibrinogen, whose absence may lead to the condition of "afibrinogenemia" and to the role of fibrinolysin.

Physiology of Labor

The use of the X-ray, particularly for the determination of relative size of fetus and maternal pelvis, continues to be the particular responsibility of Dr. Steer. During the past year Dr. Steer has published a report on his studies of the electrical activity of the human uterus in normal and abnormal labor.

Dr. Emanuel A. Friedman has been studying, from the clinical standpoint, the cervical dilatation-time curve relationship and has derived certain mean values and significant statistical limits for the various identifiable phases of cervical dilatation.

The Fetus and the Newborn

The origin of congenital anomolies has been under study by Salome Gluecksohn-Waelsch, Ph.D., Research Associate. During the course of this year she was finally successful in producing brain abnormalities in mouse embryos by immunological techniques. These abnormalities resemble closely those known to occur in mice on a hereditary basis. In collaboration with Dr. Helen M. Ranney, Instructor in Medicine, Dr. Gluecksohn-Waelsch is studying the effect of different mutations in the mouse, and the electrophoretic behavior of mouse hemoglobin.

Although these studies are still in the phase of animal experimentation, it should be remembered that congenital defect is one of the great remaining causes of perinatal loss and any new knowledge on the mechanism of their occurrence can eventually be of inestimable value in clinical practice.

Research in Gynecological Cancer

Areas of investigation, previously undertaken, have been continued during the last year. These concern particularly steroid relationships, problems in tumor differentiation and in radio-sensitivity.

The 17-Ketosteroids in adrenalectomized and gonadectomized cancer patients continue to be studied. In addition, investigation is being made of the role of the liver and kidney in the excretion of steroid metabolites of C^{14}-labelled steroids in the urine of cancer patients. Examination is also being made of the 17-Ketosteroids in cancer patients treated by radiation and with ACTH.

Reference was made a year ago to the effort being made to study cancer by means of the varying degrees of differentiation or malignancy exhibited by tumors of the same cellular type. This study is being continued by means of cytochemical, spectrophotometric and biochemical techniques. Beginning with cytochemistry, the tumors are classified into grades by Margaret E. Long, Ph.D., Research Associate, and then subjected to various staining reactions which, it is hoped, will show quantitative variations in the amount of certain nucleic acids and enzymes. With the tumor classified, correlations are being made with various biochemical properties of tumors being determined by Helena de Roetth, Ph.D., and Dudipala V. N. Reddy, Ph.D., Research Associates. Specimens of tumor tissue obtained both in the Pres-

byterian and in the Delafield Hospitals are being used for this purpose.

During the last few years, there has been a great increase in the interest throughout the country in the possibility of determining, in advance, which cases of cancer of the cervix would best be treated by radiation and which by a surgical operation. A number of methods have been proposed depending on the staining reaction of certain cells or upon the immediate microscopic changes produced by the first doses of radiation. A study of the radiosensitivity of cervical cancer is being actively followed by Dr. Saul B. Gusberg, Dr. Harold M. M. Tovell and Dr. Long.

Dr. James A. Corscaden, has been the senior author on two papers related to the clinical treatment of gynecological cancer, and Drs. Flick and Richard S. Banfield, Jr., are working under Dr. Engle on the analysis of the results of cases of certain rare neoplasms and so-called granulosa cell tumors of the ovary.

STAFF ACTIVITIES

The Obstetrical and Gynecological staff has been very active during the last year in giving lectures or addresses to institutions outside the Hospital. Altogether it appears that fourteen members of the staff have each given from one to six such lectures outside of the Medical Center.

An event of interest was the International Congress of Obstetrics and Gynecology, to be held in the future every four years, which held its organizational meeting in Geneva in July of last summer. Attending that meeting were five members of the Service: Dr. Gusberg, Dr. Plentl, Dr. Shettles, Dr. George Montgomery, Jr., and Dr. Howard C. Taylor, Jr. Another meeting of importance was the Sixth American Congress of Obstetrics and Gynecology held in Chicago in December, 1954, at which Miss Lottie M. Morrison, R.N., Dr. Stanley M. Bysshe, Dr. Gusberg, Dr. Alvin J. B. Tillman and Dr. Taylor participated.

In addition to the many lectures given in this country by the staff, Dr. Jailer lectured both in England and on the Continent, and Dr. Gluecksohn-Waelsch participated in the First Neurochemical Symposium at Oxford University during this past summer.

A number of important offices have been held in the last year by members of the Service. Dr. Engle is Chairman of the Committee on Steroids and Hormones of the American Medical Association. Dr. Gusberg has been elected to the Society of University Gynecologists, and made a member of the Board of Directors of the New York City Cancer Committee. Dr. Bysshe is serving as Chairman of the Section on Obstetrics and Gynecology of the New York Academy of Medicine. Dr. Taylor has been elected President of the American Cancer Society.

STAFF CHANGES

With regard to changes in the attending staff, Dr. Bysshe, Dr. Gusberg and Dr. Steer have been promoted to the positions of Associate Professors of Clinical Obstetrics and Gynecology in the Medical School, and Associate Attending Obstetricians and Gynecologists in the Hospital. Dr. Tovell, a Senior Resident of a year ago, has been made Instructor in the College and Assistant in The Presbyterian Hospital.

Dr. Susan W. Williamson resigned her position in the Service on December 31, 1954, to become Professor and Head of the Department of Obstetrics and Gynecology in Beirut, Lebanon. Dr. Williamson will be much missed, but Dr. Williamson and this Service are both to be congratulated on the appointment.

Two of the members of the resident staff are to be on a year's leave of absence during the course of their period on this Service. Dr. Stephen G. Burgess is spending a year in Vienna as a Jules S. Bache Fellow. Dr. Mary Jane Gray is to leave shortly for the Radiumhemmet in Stockholm as a Barnes Foster Fellow.

During the last year there have been six visiting fellows and two visiting scholars on the Service: Dr. Andrew Granitsas from Athens, Greece; Dr. Luigi Marinaccio from Bari, Italy; Dr. Karl Theiler from Zurich, Switzerland; Dr. Raymond VandeWiele from Louvain, Belgium; Dr. Paul Georges Wilkin from Louvain, Belgium; Dr. Ping-Yen Wei from Taiwan, Formosa; Dr. Rene Mingeot from Louvain, Belgium, and Dr. Herminia Baja-Panlilio from Quezon City, Philippine Islands. In addition there have been approximately thirty-five foreign visitors for a shorter period of time.

The year thus appears to have been an average one with the chief progress made in the area of improved clinical and teaching organization.

Ophthalmology

JOHN H. DUNNINGTON, M.D., *Director*

In 1954 there were 2,867 admissions to the Institute of Ophthalmology and 2,645 operations were performed. During this year a twelve-bed ward on the third floor has been converted into four, double semi-private rooms in an endeavor to meet the ever-increasing demand for semi-private care—a need made even more acute by the present ruling that compensation cases must be admitted on a semi-private status. To partially offset the loss of these ward beds, two spaces formerly used as dining rooms are now serving as four-bed wards. We now have sixteen ward-beds for men, sixteen for women and five for children out of a total of 92 in the Institute.

Since our last report two valuable members of this Service have died—Drs. Robert R. Chace and LeGrand H. Hardy. Doctor Chace, after finishing his residency in 1942, continued with the Institute as Assistant Ophthalmologist. In addition to his clinical work he lectured to the undergraduate nurses. Devoting himself conscientiously to both assignments he won the respect of all. In the death of Doctor Hardy, this Service sustained another great loss. His intense interest in its activities, along with his utter devotion to the Institute of Ophthalmology, made him a most important member whose passing has created an irreplaceable void. In recognition of his contributions to ophthalmology and as a token of esteem, his friends have established a fund for the study of physiological optics.

During this past year the Institute of Ophthalmology has been honored by many distinguished visitors from all parts of the world. Most of them came here to attend the XVII International Congress of Ophthalmology. This meeting, followed by that of the American Academy of Ophthalmology and Otolaryngology, attracted several thousand ophthalmologists to New York. Representatives of 40 foreign countries and 17 states registered at The John M. Wheeler Library, and its readers numbered 2,684 in addition to 152 guests. Many came to inspect the Institute of Ophthalmology — some remained to observe while others honored us with informative lectures. The members of the staff were active both as hosts and as contributors to these meetings.

Dr. Algernon B. Reese was elected President of the American Academy of Ophthalmology and Otolaryngology, and served as Chairman of its symposium on retrolental fibroplasia, and presented its Jackson Memorial Lecture on Persistent Hyperplastic Vitreous. Dr. Ludwig von Sallmann spoke on Lens and Ionizing Radiation before the International Congress of Ophthal-

mology, and delivered the Proctor Lecture at the opening of the Francis I. Proctor Laboratories of the University of California School of Medicine. His subject was Responses of Intraocular and Blood Pressures to Electric Stimulation of the Diencephalon. Dr. Reese was also a guest speaker at this same meeting and spoke on Pre-Cancerous and Cancerous Melanosis of the Conjunctiva. Dr. Frank D. Carroll and Dr. Andrew deRoetth, Jr., reported their observations on the Effect of Retrobulbar Injection of Novocaine on the Optic Nerve before the American Academy of Ophthalmology and Otolaryngology. They showed the ensuing rapid lowering of visual acuity is transient but profound. Dr. Robert McC. Day, in collaboration with Dr. Sidney C. Werner of the Medical Service, reported the results of his studies on the Removal Rate of Radiosodium (Na 24) from the Human Orbit in Graves' Disease, in the Archives of Ophthalmology of the American Medical Association. At its meeting last June the American Ophthalmological Society conferred on Dr. John H. Dunnington its Howe Medal for "distinguished service". He spoke on Congenital Alacrima in Familial Autonomic Dysfunction. The Canadian Ophthalmological Society elected him to honorary membership, and he was the American guest speaker at its meeting in Montreal. He served as Vice-President of the XVII International Congress of Ophthalmology, and on the Council of the American Academy of Opthalmology and Otolaryngology.

Many members of the Service have continued to participate in research, both basic and clinical. Dr. von Sallmann, working under a grant from the Atomic Energy Commission to Columbia University, has shown that in radiation cataract in the rat the lens changes resulting from ionizing radiation closely resemble those caused by old age. Furthermore, he has demonstrated that cytological changes occur in these lenses in about 20 minutes after exposure to the X-ray beam. Working under the auspices of the Mary W. Harriman Fund, in collaboration with Dr. Otto Lowenstein, he has demonstrated in cats the existence of a diencephalic center for the control of intraocular tension. Dr. Devorah L. Khorazo, working with Dr. Seymour P. Halbert, Associate Professor of Microbiology, has studied the seasonal variation of antibiotic producing microorganisms in the ocular flora. She is also continuing her investigations, with the aid of Dr. Halbert and Dr. Beatrice C. Seegal of the Department of Microbiology, on homologous antilens antibodies. With the assistance of Mr. Gustav Bethke, our artist, and Mr. James Lafayette of the photographic department, she prepared an excellent exhibit on Microbiology and its contributions to Ophthalmology for the meetings of the International Congress of Ophthalmology and the American Academy of Ophthalmology and Otolaryngology.

Sponsored by the Dunlevy Milbank Fund the studies on retrolental fibroplasia of Dr. Reese and his co-workers, Dr. William A. Silverman, Assistant

Attending Pediatrician, and Dr. Josef Stepanik, have continued. Through combining their efforts with those of other investigators the incidence of this blinding disease has been greatly altered. It has been shown that high oxygen therapy plays a most important role in producing it. Under low oxygen administration only 16 of the 180 babies examined in the premature nursery at the Babies Hospital showed any sign of this disease and in eight of them the fundi returned to normal. These findings are in sharp contrast to the 11 cases of retrolental fibroplasia they found in 59 premature infants examined in another hospital where high oxygen therapy was used. This national cooperative research project has been completed and its preliminary report concludes that "the incidence of retrolental fibroplasia is positively associated with the use of oxygen—limiting the amount of oxygen used in the care of premature infants to that required for clinical emergency, is without effect on the survival rate of the infants—and much of the deleterious effect appears to be associated with exposure to oxygen within the first 10 days of life." In active cases of retrolental fibroplasia, irradiation therapy did not significantly influence the course of the disease. The records of the 300 cases, seen since the establishment of this clinic, were statistically evaluated and published in the American Journal of Ophthalmology.

In the radiotherapy department, under the leadership of Doctor Reese, Drs. George R. Merriam, Jr., and Arnold W. Forrest have continued the clinical investigations begun seven years ago. The object of these studies has been to determine criteria for the use of irradiation in ophthalmology. The importance of such findings has become increasingly evident through the recent enthusiastic endorsement given beta radiation without consideration of the harmful effects that may result from this type of treatment. Retinoblastoma has been treated with triethylene melamine and high voltage X-ray and the preliminary results on 35 patients were reported by Dr. Reese and Dr. George A. Hyman of the Department of Medicine and Francis Delafield Hospital, at the meeting of the International Congress of Ophthalmology. In an effort to eliminate some of the disagreeable side effects of this therapy, treatment with extremely high voltages is being undertaken. Ocular lymphomas, which occur both primarily in the orbit and as part of generalized disease, are being treated to determine the most adequate therapeutic dosage, the proper methods of protecting uninvolved structures as well as the survival rate. The use of low voltage therapy on carcinoma of the lids has continued to give satisfactory results. The instructional value of this work is recognized by the assignments of all residents in Ophthalmology and Radiology to this Service. Present investigations include measurement of the actual amount of radiation reaching various parts of the eye when radiotherapy is given to adjacent structures, e.g., sinuses and the amount of radiation necessary to produce cataract.

Dr. Graham Clark has continued his investigations on retinal detachment (a) by measuring the electrical characteristics of the various tissues of the eye, (b) by determining the histologic responses to variations in the frequency of electrosurgical currents, (c) and by construction of an improved electrode for use in the surgical treatment of this disease. In collaboration with Dr. George K. Smelser of the Department of Anatomy, he has also determined the variation in corneal tissue under contact lenses, by measuring the tissue resistance and capacitance. These investigations have been financed through the generosity of the New York Foundation, Inc.

Dr. William G. Everett has been conducting research on the measurement of the axial length of the human eye in life by means of X-rays. He has devised a new apparatus capable of measuring the axial lengths of both eyes in a given subject, with an accuracy in the order of 0.2 mm. He has been working in cooperation with Miss M. Catherine Rittler on a study of variations of axial lengths of the eyeball in anisometropia. Statistics are also being compiled about axial lengths of the eye, and X-ray effect on the eye, as concerned with the physiology and some pathological states of the eye.

The activities of the glaucoma clinic have continued to stress the use of provocative tests and facility of aqueous outflow as diagnostic aids. A new therapeutic agent, Diamox, has been shown to be of value in the early treatment of acute congestive glaucoma, and in some far advanced cases of chronic simple glaucoma, when other therapeutic measures were of no avail. Dr. deRoetth, working under a grant from the Sloan Foundation, has continued his studies on the metabolism of the ciliary body. The importance of these investigations is emphasized by the clinical use of Diamox since this drug affects the metabolism of the ciliary epithelium in the eye.

In the orthoptic laboratory, investigations have continued on an orthoptic treatment of strabismus, and it is to be hoped that a critical evaluation of the efficacy of this form of therapy will be forthcoming in the near future. Miss Nancy Capobianco is President of the American Association of Orthoptic Technicians, and Editor of the American Orthoptic Journal.

The activities of this Service, both clinical and research, have been made possible through the continued generosity of many benefactors. Acknowledgment of our deep appreciation for their help is gladly given to each and every one of them. In addition to those who wish to remain anonymous we send our sincerest thanks to the Mary W. Harriman Fund, the Dunlevy Milbank Foundation, Inc., the National Council to Combat Blindness, Inc., the New York Foundation, Inc., the Sloan Foundation, the Snyder Fund, and the Whitehall Foundation. I am most grateful for the continued wholehearted cooperation of all the members of the Service.

Orthopedic Surgery

Alan DeForest Smith, m.d., *Director*

The advancing age of the population is reflected in the increase in the number of patients with injuries and diseases peculiar to old age, which are being treated in the New York Orthopaedic Hospital. Two of the most important of these are fractures of the hip and degenerative arthritis of the hip. Fortunately improvement in the methods of treating these conditions has led to much more satisfactory results. The surgical treatment of fractures of the femoral neck makes it possible to get the patients out of bed much more quickly, and also has eliminated much of the pain and suffering which formerly accompanied this injury. The number of successes in obtaining union of the fracture also has risen substantially. Painful arthritic conditions due to degenerative changes also are being treated much more satisfactorily. Several types of arthroplasty operations as well as fusion of the joint have enabled many of these patients to resume an active and useful life.

It has been found possible to procure adequate amounts of bone for the Bone Bank from cadavers, but the procurement of this material under aseptic conditions has presented a problem. Dr. C. Andrew Bassett has made arrangements with the High Frequency Laboratory of the Massachusetts Institute of Technology for sterilizing the bone by radiation. The bone is shipped in several layers of heat sealed polyethylene in portable thermos units containing dry ice, and is returned to the Hospital after the radiation treatment. It was found that the large dose of radiation at first used resulted in changes in the graft matrix which rendered it brittle, and it is believed that the desired result may be obtained with a less intensive treatment. The possibility of using the cobalt bomb for this purpose is being explored at the Francis Delafield Hospital.

During the past year 344 deposits of bone were placed in the Bank, of which 271 were found to be usable. Two hundred and thirty grafts were used in 212 different patients, an average of one on every operating day. Grafts also were supplied to the Ear, Nose and Throat, and Plastic Surgery Services for reconstruction work on the face.

In the histochemistry laboratory, Dr. Bassett, in conjunction with Drs. Gabriel C. Godman, Assistant Professor of Surgery, Charles A. Ragan, Jr., Associate Attending Physician, and Karl Meyer, has studied the alkaline phosphatase activity of various species of cells from mesenchymal tissues. It has been found that cells arising primarily from muscle, fascia and tendon demonstrate little or no evidence of alkaline phosphatase. On the other hand,

cells arising primarily from bone, either membranous or cartilaginous, produce exceptionally high concentrations of the enzyme. This is true of only one of the two predominant cell types migrating from bone, i.e., the osteoblast. These cells appear to retain their morphologic and enzymatic characteristics for as long as six months in culture. This tends to prove that the osteoblast is a specific cell.

It has been possible to grow several strains of mesenchymal cells in quantities large enough to make possible the investigation of the types of mucopolysaccharides produced by each type of cell in the culture medium as well as in the cell itself. This is being done with the collaboration of Dr. Meyer. The potential of such a system for investigating the chemical background of bone development seems unlimited.

In a similar manner Dr. Godman, who is in charge of the histochemistry laboratory, is investigating the behavior of muscle cells in tissue culture. He plans to determine the kinds, amounts and sites of distribution of various components at several stages of differentiation from sarcoblast to the adult muscle fiber. It is also planned to compare these histochemical characteristics of sarcoblasts with those of the cells of certain tumors of supposed muscle origin. Dr. Godman believes that the material of this study is ideal for investigating some aspects of cyto-differentiation, a subject central to the problem of carcinogenesis and of regeneration.

These investigations were supported in part by grants from the Jane Coffin Childs Fund and the Damon Runyon Cancer Fund. They were carried out in conjunction with and in the laboratories of the College of Physicians and Surgeons.

A monograph on the Surgery of the Elbow, by Dr. Frederick M. Smith, was published in November. Articles by Dr. Smith on Fractures of the Lateral Condyle of the Humerus in Children, and Fracture of the Femoral Neck as a Complication of Pelvic Irradiation, also appeared during the year. Dr. John J. Joyce, III, collaborated with Dr. Smith in the former. Dr. Harrison L. McLaughlin was the author of papers on Calcified Deposits in the Subdeltoid Bursa, Fracture of the Carpal Navicular, Fractures of the Ankle, and Soft Part Injuries to the Extremities. With Dr. Alexander Garcia he presented An Adjustable Fixation Device for the Hip.

Dr. C. Zent Garber delivered a paper on Multicentric Ostcogenic Sarcoma in Paget's Disease. In addition to investigations which he carried out on giant cell tumors, and physical chemical measurements of mixtures of some compounds entering into the formation of bone, he assisted in a number of projects carried out by other members of the staff.

Dr. Robert E. Carroll read a paper on Digital Arthroplasty of the Proximal Interphalangeal Joint which later was published. He also presented, with Dr. Garcia, a study of Calcium Deposits in the Hand, and a description of Giant

Cell Tumors in the Hand. Doctors Melvin B. Watkins, James B. Jones, Charles T. Ryder and Thomas H. Brown, Jr., published a paper on Transplantation of the Posterior Tibial Tendon. Dr. Alan DeForest Smith presented the subject of Treatment of Bone and Joint Tuberculosis to the Boston Orthopaedic Club.

Dr. Frank E. Stinchfield presented a paper last June to the American Medical Association in San Francisco, written in collaboration with Dr. William A. Sinton, entitled Clinical Significance of the Transitional Lumbosacral Vertebra. This paper has been published.

During the year 8,251 new patients were treated in the out-patient department, and there were 30,907 revisits. 1,236 patients received 26,300 days of care in the wards.

Otolaryngology

EDMUND P. FOWLER, JR., M.D., *Director*

The year has been marked by improvements in the teaching program, both for residents and for medical students. There has been an interesting development whereby much of the research work has been done in the out-patient department, while the medical students have shown more interest in the work on the wards and in the operating rooms. Dr. Milos Basek has been appointed Assistant Otolaryngologist and will supervise the residents' training program.

During the year we welcomed to our Service, Dr. Arnold Kremen, from the University of Minnesota. He succeeds Dr. DeGraaf Woodman as Chief of the Head and Neck Division. Dr. Jules G. Waltner has been assigned to this division in charge of ear, nose and throat problems. Dr. Robin Rankow, Assistant Surgeon, is in charge of oral surgery. We continue to have complete cooperation with the departments of radiotherapy and surgical pathology. Such a team, in which the specialists interested in head and neck surgery work together with complete general medical and dental help, is available only in a hospital like the Medical Center, and is in sharp contrast to what occurs in specialized hospitals where certain skills are often not available at crucial moments.

During the past year 1,320 operations were performed on adults using only 33 beds. The high turnover, which this implies, was possible because of a special staff to arrange admissions, discharges and operating room schedules. Even so, we have been handicapped by the fact that a high percentage of ear, nose and throat patients on the adult service are men. In general, they out-number the women two to one. Plans are now well underway to convert the twelve-bed female ward to multiple units, which will provide greater flexibility, not only for ward patients, but also for semi-private patients. It is expected that this innovation will increase the efficiency of admissions, discharges and operating schedules even more. Members of the Service were called upon by other Services for 126 operative consultations.

Due to the demands of military service, it has been necessary for us to take four assistant residents in July, instead of two assistant residents in January and two in July, as in former years. Fortunately, several of the residents have been partially trained in otolaryngology elsewhere, so they will have sufficient credit, by the time they finish at Presbyterian Hospital, to meet the requirements of the American Board of Otolaryngology even though they do not remain the full three years with us.

Dr. Woodman has been appointed Chairman of the Section of Otolaryn-

gology of the New York Academy of Medicine. Dr. Edmund P. Fowler, Jr. is President of the New York Otolaryngological Society. Dr. Robert M. Hui and Mr. Donald M. Markle, with Dr. Fowler, have been instrumental in setting up proper standards for the Conservation of Hearing program, as well as for the procurement of hearing aids, for the New York State Department of Health. Dr. Waltner has been elected to membership in the American Rhinological, Laryngological and Otological Society.

Drs. Franz Altmann, Fowler and Woodman were among the officially invited guest speakers to the Pan-American Congress of Oto-rhino-laryngology in Mexico City, in February. They spoke on vertiginous syndromes, nerve and industrial deafness and laryngeal stenosis respectively. Dr. Altmann has published a monograph on Meniere's Disease and Acoustic Neuritis. He presented papers on these subjects in Kansas City, and on the Importance of Waldeyer's Lymphatic Ring, in Philadelphia. The first official showing of his monumental film on the "Development of the Ear" took place in September. Dr. Altmann also attended the meeting of the Collegium Otolaryngologicum in London, in August. While abroad, he visited clinics in Germany and Austria, studying new operative techniques for the improvement of hearing. New techniques in otological surgery for improving the hearing, rather than simply preventing infection, seem to be expanding rapidly.

Under grants to Columbia University, but with the research on the wards of Presbyterian Hospital, further studies have been done on constitutional factors in Meniere's disease and otosclerosis in the Constitutional Clinic of Dr. William H. Sheldon, Assistant Professor of Medicine. A paper on Somatotypes of Meniere's and Otosclerotic Patients was read jointly by Dr. Albert Damon, Assistant Physician, and Dr. Fowler at the annual meeting of the American Academy of Ophthalmology and Otolaryngology, which was held in New York in September. At the same meeting Dr. Herbert S. Friedman and Dr. Bela Marquit presented a course on Bone Grafts in Plastic Surgery of the Nose and Face.

To coincide with the meeting of the American Academy of Ophthalmology and Otolaryngology, an Alumni dinner for residents from Presbyterian Hospital was arranged. It was by far the largest ever held. The traditional discussion of the practice of otolaryngology gave the residents a real perspective in their specialty. Graduates from Presbyterian Hospital have apparently been most successful, for most of them throughout the country are so busy they are seeking associates.

The resignations of Dr. George R. Brighton, Dr. William H. Holden, Dr. Walter M. Glass and Dr. Albert R. Kolar are reported with regret.

Pathology

HARRY P. SMITH, M.D., *Director*

The recent installation of deep-freeze equipment permits long-term storage of fresh specimens without loss of color or texture. It is now possible to use such specimens whenever needed in staff conferences and in the systematic instruction of students. Heretofore these exercises have been dependent to a considerable extent upon use of museum specimens and photographs. The frozen specimen technique does not permit one to dispense altogether with fixed specimens and photographs, but it does permit a flexibility in use of material which is otherwise of a highly transient nature.

The various research projects of the Department were outlined in general terms in last year's report. It is worthy of note, however, that activities in research on clinical cases of hemorrhagic disease have increased during the current year. This is related to studies currently being made on the fundamental mechanisms of blood clotting in the departmental laboratories located in the Medical School. It is related also to an increased trend for consultation on clinical cases on the wards and in the out-patient department of the Hospital.

Dr. Joseph E. Flynn, Associate Attending Pathologist, tendered his resignation on June 30, to accept a position as Director of the Pathology Service in the new university hospital now under construction at the University of Missouri. He is also the new Head of the Department of Pathology in the medical school with which it is associated. Our own Medical Center gains stature and prestige when it supplies top level academic and professional leadership for its sister institutions.

The ratio of necropsies to deaths for the year ending December 31, 1954, follows:

Pediatrics	78	Ophthalmology	0
Dermatology	100	Orthopedic Surgery	66
Private	44	Otolaryngology	33
Medicine	65	Psychiatry	0
Neurology	48	Surgery	69
Neurosurgery	35	Urology	52
Obs. & Gyn.: Adults	55	Vanderbilt Clinic	0
Neonatal	47		
		Average	60

Pediatrics

RUSTIN MCINTOSH, M.D., *Director*

During 1954, the Pediatric Service gave 47,616 days of care to 4,486 patients, of whom 2,750 were on the ward service, and in the Pediatric Division of Vanderbilt Clinic the number of visits totaled 44,340.

The lower percentage occupancy of beds, 68.3 per cent, as compared with last year's 71.7 per cent, appears to be due in part at least, to the prevailing trend toward more successful treatment of infections in the home, often even before accurate diagnosis is possible. Reduced occupancy of pediatric beds has been experienced in various teaching hospitals, not only in New York, but in other cities as well. The inference that fewer patients of pediatric age require hospital treatment for casual illness than has been the usual experience in the past, is supported by the falling ward-bed occupancy in the face of a rising out-patient census in the Pediatric Division of Vanderbilt Clinic.

If out-patient treatment is to continue to play its proper part in the care of our patients, constituting as it does an integral part of the service rendered to children both sick and well, due regard must be had for the increasing out-patient case load with no parallel expansion of facilities. In spite of every effort to spread patient visits evenly, there are times when crowding in the pediatric clinic reaches such a degree that work cannot be carried on at optimal efficiency. Enlargement of out-patient facilities for children is urgently needed to bring them to a level comparable to those of other services.

There have been no major changes in organization or policy during the past year. Dr. Annie V. Scott resigned in order to accept a Public Health post in North Carolina. Dr. Paul E. Wilson and Dr. Benjamin C. Berliner were granted military leaves of absence; Dr. Rodman Gilder, Jr., and Dr. Robert West were welcomed back after separation from the armed services. New appointments include those of Dr. Rose G. Ames, Dr. Albert J. Beckmann, Dr. Saul Blatman, Dr. Alexander Blum, Jr., Dr. Lawrence J. Cassard, Dr. Ruth U. Donovan, Dr. Phoebe Hudson, and Dr. Virginia Van Geyt as Assistant Pediatricians.

The research activities carried out by members of the Pediatric Service are centered principally in the laboratories of Babies Hospital and in certain areas of Presbyterian Hospital assigned for this purpose. Although funds for support of pure research are channeled for the most part through the University, a number of generous gifts have been made directly to the Hospital by friends and relatives of our patients, with the designation that funds thus made available be applied in part at least, to research. It is a pleasure

to acknowledge our indebtedness to the numerous donors who have contributed to the Babies Hospital Nephrosis Fund, to the Dysautonomia Research Fund, to the Robert Bacon Whitney Cystic Fibrosis Fund, the Celiac Research Fund, the Gabrielle Holst Fund for Cancer Research, and to the Babies Hospital Laboratory Development Fund; at times for a designated purpose, at other times for use at the discretion of the Director of the Service. Through the generosity of Dr. John P. Lambert, Assistant Pediatrician, and of his sister, his brother and his mother, the Dr. Charles I. Lambert Memorial Fund has been set up for the promotion of research and education in child psychiatry, the income to be expended on authorization of the Director of the Pediatric Service in consultation with others. Another important gift in support of orthopsychiatric work was made by the relatives of a patient who had been helped some years ago by Dr. William S. Langford, Director of the Pediatric Psychiatric Clinic. To all of these benefactors warmest thanks are due.

In the field of microbiology an important and technically difficult study is being made by Dr. Isabel Morgan Mountain and Dr. Katherine Sprunt, concerning the factors which control the inherited characteristics of poliomyelitis viruses. Suggestive evidence has been obtained that by manipulations of a purely chemical nature it may be possible to alter the nature and behavior of a given strain of virus. Dr. Hattie E. Alexander and Dr. Stephen Zamenhof, Assistant Professor of Biochemistry, are participating actively in this project which has been supported by the National Foundation for Infantile Paralysis through a grant to Columbia University.

Dr. Alexander and Miss Grace Leidy, Research Assistant in Pediatrics, are continuing their study of the control of inherited traits of cells, specifically of the bacterial cells of H. Influenzae, from which have come several important contributions to bacterial genetics. With Dr. Douglas S. Damrosch, Associate in Pediatrics, Dr. Alexander is investigating factors which contribute to optimal therapy of meningeal and disseminated miliary tuberculosis. The latter two projects are supported by a grant from the National Institutes of Health of the United States Public Health Service.

Aided by a grant from Mead Johnson & Company, Dr. Ruth C. Harris has pursued her studies of the relative values of a number of liver function tests at different age levels, and has greatly improved their usefulness in accurate diagnosis. At the autumn meeting of the Association for the Study of Liver Diseases, held in Chicago, she gave a paper on the liver lesions found in various disorders of newborn infants. With financial aid from a number of friends of the Hospital, and in collaboration with workers in the Medical Service, Dr. Paul A. di Sant'Agnese has extended his studies of the electrolyte content of the sweat of patients with cystic fibrosis of the pancreas as well as in other conditions. The importance of pancreatic fibrosis as the

background of clinically significant lesions of the liver has been further documented by a survey of our own rather extensive material. It is now becoming apparent that, in proportion as the treatment of patients with cystic fibrosis improves, increasing numbers live to a relatively advanced age and come to exhibit clinical features which previously had not been associated with this condition. Dr. di Sant'Agnese contributed a paper on this subject at a meeting of the American Academy of Pediatrics, held in Chicago in October. In collaboration with Dr. Zacharias Dische, Associate Professor of Biochemistry, he is carrying out a study of the chemical composition, in particular the mucopolysaccharide structure, of body secretions in patients with fibrocystic disease and in controls, hoping in this way to characterize their physicochemical differences and, eventually, the possible pathogenesis of symptoms.

In an effort to determine whether the substance or substances responsible for the clinical picture of nephrosis are present in the circulating blood of patients so afflicted, Dr. Conrad M. Riley, in collaboration with Dr. Beatrice C. Seegal, Associate Professor of Microbiology, has replaced the blood of normal rats with large quantities of blood taken from rats with artifically induced "nephrosis." The disease was not successfully transmitted in this manner. In comparable experiments nephrotoxic serum nephritis has been artificially induced in one of a pair of parabiotic rats. Radioactive tracer substances have been employed in studying the rate of exchange of circulation between the two members of a pair of rats, the larger blood vessels of which have been joined together surgically. Dr. Ruth Alice Davis has participated in these investigations. Under Dr. Riley's supervision studies have been continued on a clinically distinct but poorly understood syndrome, familial dysautonomia (the Riley-Day syndrome) with the collaborative participation of the following workers: Dr. Alfred M. Freedman, Assistant Pediatrician (psychiatrist); Dr. James B. Campbell, Assistant Attending Neurological Surgeon; Dr. Joan Havel (psychologist); Mr. William Helme (psychological statistician); Mrs. Katrina de Hirsch and Mrs. Jeannette Jansky (speech therapists); and Miss Marjorie Eustis (psychiatric social worker). A paper "Further observations on Dysautonomia," was delivered before the American Pediatric Society at Buck Hill Falls, in May.

With the participation of Dr. Paul H. Boyer, Research Assistant in Pediatrics, Dr. Dorothy H. Andersen, Associate Attending Pathologist, has assembled data on the effect of diet during pregnancy on the development of cystic fibrosis of the pancreas in the offspring. Antibiotics and new combinations of therapeutic agents are being systematically evaluated as to their influence upon the chronic pulmonary infection of pancreatic fibrosis. Data have been gathered and are being evaluated in a genetic study of celiac disease comparable to that which was reported some years ago in a similar

genetic study of cystic fibrosis of the pancreas. Dr. William A. Blanc is continuing his study of the relation of placental abnormalities to the anatomic lesions found in premature infants.

With support from the Association for the Aid of Crippled Children, and later from the National Institutes of Health of the United States Public Health Service, Dr. Mary R. Richards, Dr. Van Geyt, Dr. Ames and Dr. Mary H. Samuels have continued the long-term study of the incidence and pathogenesis of congenital malformations. From this study there has emerged a more accurate evaluation of the significance, actually the relative insignificance, of heart murmurs heard during the neonatal period as an index of congenital malformation of the heart; a subject on which Dr. Richards gave a paper at the meeting of the American Academy of Pediatrics in October. With Dr. John Caffey's collaboration in the reading of roentgenograms, not only have more accurate standards been developed for evaluation of the normal hip joint in its growth and development in early life, but in addition there have been detected indications that abnormalities of the hip joint constitute an additional and hitherto unrecognized component of the wide-spread developmental disturbance known as mongoloid idiocy.

Members of the Service have, as is customary, been active in scientific and educational conferences in various parts of the country, and some have been marked for well-deserved recognition. Dr. Alexander was awarded the Stevens Triennial Prize of the College of Physicians and Surgeons, and was given a distinguished graduate citation by Gaucher College, her alma mater. She was elected chairman of the pediatric section of the New York Academy of Medicine. Dr. Andersen was invited to address the staff of the Hôpital des Enfants Malades in Paris in May, and in October spoke at the Alumni Meeting of Strong Memorial Hospital, in Rochester. In March Dr. Caffey served as pediatrician-in-chief for the day at the Boston City Hospital and gave the annual lecture for house officers of that institution. He was the Douglas P. Arnold Memorial Lecturer of the Children's Hospital of Buffalo, at the University of Buffalo School of Medicine. At the annual meeting of the American Academy of Pediatrics he conducted a Round Table on pediatric radiology. Dr. Langford served on the International Preparatory Commission which met in Copenhagen in March, to prepare a program for the International Institute on Child Psychiatry, held later in the year in Toronto. While in Copenhagen he lectured before the Scandinavian Society of Child Psychiatry on experiences with young adolescents with anorexia nervosa. He served as Second Vice-President of the Association for Research in Nervous and Mental Disease, and was also re-elected Treasurer of the American Orthopsychiatric Association. Dr. McIntosh was President of the American Pediatric Society for 1953-54, and, as one of the Vice-Presidents of the International Poliomyelitis Congress, attended its third conference held in Rome

in September. He served as President of the Association for Research in Nervous and Mental Disease in organizing and conducting a meeting on neurology and psychiatry in childhood. He was elected a member of the American Academy of Arts and Sciences, and corresponding member of the British Paediatric Association. Dr. Riley has served as Chairman of the Medical Advisory Board of the National Nephrosis Foundation.

Tribute must be paid to the loyalty and hearty cooperation of all members of the staff, administrative, nursing, professional and those of the ancillary services, in maintaining high standards of work while preserving the informal and cheerful atmosphere which contributes so effectively to the recovery of patients. In some areas the work load is heavier than is comfortable or, in the long run, wise. In certain areas the magnitude of the problem can be measured with reasonable accuracy in terms of specific indices, such as the increased number of autopsies and surgical examinations which has in recent years thrown a heavy load on the pediatric pathology laboratory. In other areas the index of measurement is less clearly defined, but the problem no less pressing. In the latter category should be included the serious crowding in the pediatric division of Vanderbilt Clinic and the increasing variety and complexity of diagnostic tests, not only in all of the laboratory disciplines, but also in such special services as pediatric radiology and clinical psychology. In the laboratories, the competition between research interests and diagnostic requirements for simple breathing space, let alone elbow room, calls for serious consideration.

Physical Medicine and Rehabilitation

ROBERT C. DARLING, M.D., *Director*

During the year 52,385 patient visits were made to the Physical and Occupational Therapy services and a total of 225,372 treatments were given. Distribution of these treatments was as follows: 21 per cent to private and semiprivate patients, 28 per cent to ward patients, and 51 per cent to ambulatory patients.

The distinction between a *disability* and a *handicap* is becoming an increasingly important one. A disability need not produce a major handicap if the patient is trained and prepared maximally to live with his disability. It is an important function of this Service to utilize and promote techniques which reduce or eliminate handicaps resulting from physical disability.

The residency-fellowship program continues to function on an active though modest scale. Dr. Ragnar Stadin, Resident, was the recipient of a senior fellowship from the National Institute for Neurological Diseases and Blindness during his final year of training under the residency. He and Dr. S. J. Yue completed the requirements for certification by the Board in this specialty and passed the first part of the required examination. The termination of their formal training leaves temporary vacancies in the program for which candidates are currently being considered.

The affiliation with the Institute for the Crippled and Disabled has been notably strengthened in the past year. The Institute now has a full-time representative from its Limb and Brace Shop at the Medical Center for consultation on brace problems. In other areas also, there has been an increased exchange in services between the institutions.

Research studies of abnormalities of the sweat in fibrocystic disease of the pancreas, undertaken in collaboration between Dr. Robert C. Darling and Dr. Paul A. di Sant'Agnese, Assistant Attending Pediatrician, are approaching completion as a research venture. The results furnish a basis for a diagnostic criterion for the disease which will continue to be used in the evaluation of patients.

Dr. Milos J. Lota, with Dr. Darling, is exploring the effects of ultrasound. With the aid of the Baruch Gift to Columbia University for Physical Medicine, they have measured changes in the permeability of red blood cells, which are more than the effect of heat absorption. Clinically, ultrasonic

therapy in the treatment of selected cases of painful scars has shown considerable promise.

A gift from the Lorenz Foundation to Columbia University has made possible the start of a study on the physiology of rest. Dr. Yue has embarked on this study with Dr. Darling; at the start, it will aim to discover in normal subjects the factors which enhance recovery from a standard bout of exercise. Dr. Yue also has made a study of cerebral palsy among twins; this study has been accepted for publication.

Dr. William B. Snow returned from sabbatical leave early in 1954 and reentered his active program of medical and community service. He was President of the American Congress of Physical Medicine and Rehabilitation during this year. He has strengthened the organization of Physical Medicine in the Hospital by arranging regularly scheduled Physical Medicine rounds on the various ward services, and by extending the consultation services. Dr. Snow was appointed a member of the American Registry of Physical Therapists in addition to his several continuing advisory positions.

Dr. Darling is serving as a senior consultant to the Manhattan Veterans Administration Hospital and has been appointed a consulting member of the Editorial Board of the Archives of Physical Medicine and Rehabilitation.

Dr. Edward E. Gordon, Associate Professor of Rehabilitation Medicine, continues his joint service at the Institute for the Crippled and Disabled, and at Vanderbilt Clinic. He has taken over responsibilities for Physical Medicine in the Group Pediatric Cerebral Palsy Clinic. He contributed the medical phases of a workshop course in rehabilitation given jointly by the Institute for the Crippled and Disabled, and Teachers College, Columbia University. His research program on paraplegic gaits and energy needs, supported by a grant from the United States Public Health Service to Columbia University, is continuing. He has presented papers before several clinical groups on the subjects of the hemiplegic arm and the upper extremity amputee.

Dr. A. David Gurewitsch was Chairman of the session on Physical Medicine at the annual convention of the New York State Medical Society. He lectured on Physical and Psychiatric Aspects of Rehabilitation of the Orthopedically Handicapped before the Association for Advancement of Psychotherapy. He continues as advisor to Blythedale, Valhalla, New York.

Dr. Morton Hoberman is currently President of the New York Society of Physical Medicine and Rehabilitation, and has been elected to the Coordinating Council for Cerebral Palsy in New York City. He spoke on the Role of Physical Medicine and Rehabilitation in Muscular Dystrophy at a symposium of the Muscular Dystrophy Society.

The Hospital Service, together with the Institute for the Crippled and Disabled, and the Department of Physical Medicine and Rehabilitation in the

College of Physicians and Surgeons, presented an exhibit of coordinated services before the New York State Medical Society.

The Service has been privileged to entertain as guest lecturers, Dr. Bronson Crothers of Boston, Dr. Eric Denhoff of Providence, R. I., and Dr. Samuel P. Hicks of Boston. Dr. Hicks' lecture was sponsored by a gift from United Cerebral Palsy Associations of New York State to Columbia University.

Psychiatry

LAWRENCE C. KOLB, M.D., *Director*

During the year the organizational structure and the arrangements for patient care underwent a number of changes. Dr. Lawrence C. Kolb, the new Professor and Executive Officer of the Department of Psychiatry, joined the Psychiatric Service on July 1, 1954, and relieved Dr. Irville H. MacKinnon, the Acting Director of the Psychiatric Service.

An executive committee of the Department of Psychiatry of the Medical School was established in September 1954. This committee consists of Drs. George E. Daniels, William S. Langford, Professor of Psychiatry, Robert B. McGraw, MacKinnon, Sandor Rado, Clinical Professor of Psychiatry, and Kolb. The committee has as its function a review of the patient care within the Medical Center with a view of improving the integration of services between the various units of the Department of Psychiatry of the Medical School with the Psychiatric Service of the Presbyterian Hospital, the establishment of a sound graduate training program in psychiatry, a review and further improvement in the undergraduate teaching program, and the encouragement of activities leading to additional research. The committee now functions with the Psychiatric Service of Presbyterian Hospital represented by three divisions. Dr. McGraw continues to direct the psychiatric out-patient functions of the Vanderbilt Clinic; Dr. Daniels has assumed the direction of the in-patient services in the Presbyterian Hospital; and Dr. Langford is in charge of pediatric psychiatry.

The functioning of the committee is already evident in the development of new policies regarding the transfer of patients from the Presbyterian Hospital to the New York State Psychiatric Institute. Through the collaboration of the various services and with recently expressed approval of the Commissioner of Mental Hygiene of the State of New York, it is now possible to transfer acutely disturbed patients needing psychiatric hospitalization to the Psychiatric Institute for observation and treatment rather than to other mental hospitals or sanitaria; the transfer to be effected following examination by the staff of the Psychiatric Service of the Presbyterian Hospital. Transfers from the out-patient department of Vanderbilt Clinic are to be arranged only if the patient is under prolonged treatment or study and offers potentialities for significant investigation. Since August of 1954 eight cases from the wards of the Presbyterian Hospital have been transferred to the Institute. It is believed that the new admission policy will provide improved care for our patients and afford a means of pursuing and following treatment or in-

vestigative programs instituted in the Presbyterian Hospital.

Similar plans for a closer integration of pediatric psychiatry are presently under study by Dr. Langford and a committee consisting of Drs. Hilde Bruch, H. Donald Dunton and Rodman Gilder, Jr., Assistant Pediatrians. Again it is proposed that the in-patient services of the Psychiatric Institute be closely linked with the present out-patient facilities of Babies Hospital and Vanderbilt Clinic. It is expected that this service will become effective provided that additional funds become available to assist its development in the ensuing year.

For the first time a full-time psychiatric resident is attached to the Presbyterian Hospital Psychiatric Service. Dr. John O'Connor, who had completed one year of psychiatric residency at Kings County Hospital, officially commenced his second year of psychiatric residency on July 1, 1954, in the Presbyterian Hospital. The importance of his service was shown during the first three months of his service during which he was called in to see 81 emotionally disturbed patients suffering from hyperventilation syndrome, lupus erythematosis, myocardial infarction, gastrointestinal bleeding, ulcerative colitis, renal insufficiency, rheumatic heart disease, as well as others with primary problems of severe depression, suicidal intent and gross psychotic symptomatology. This brief experience makes it clearly evident that there is a need for continuing an active psychiatric residency program which will not only provide a high standard of education for the residents but will also serve the therapeutic needs of the Hospital itself.

Approximately 64 ward consultations were performed by the Vanderbilt Clinic staff in 1954. However, in November, the in-patient Hospital services under Dr. Daniels assumed the responsibility for in-patient consultations while the Vanderbilt Psychiatric Clinic, under Dr. McGraw, served the psychiatric consultations requested by the Vanderbilt Clinic admitting emergency.

The staff of the Presbyterian Hospital Psychiatric Service has been strengthened by the addition of Drs. Arnold Cooper, H. Daniel DeWitt, Alan Goldfarb, Alfred Messer and Robert Senescu.

Investigative work covering a wide range of subjects is being pursued by a number of the staff of the Presbyterian Hospital. Dr. B. Ruth Easser, Research Assistant, continues to interview prenatal and postnatal patients in cooperation with the Obstetrical and Gynecological Service in an attempt to study the attitudes towards pregnancy and the effects of these attitudes upon labor, delivery and subsequent motherhood.

Dr. Leon Moses, Assistant Physician, has continued his psychoanalytic physiologic study of hypertension, a report of which will be published presently.

Drs. Daniels, Aaron Karush, Assistant Physician, O'Connor and Senescu

continue a joint project initially undertaken five years ago in collaboration with Drs. C. A. V. Burt, Assistant Attending Surgeon, Charles A. Flood, Associate Attending Physician, Robert B. Hiatt, Assistant Attending Surgeon, and Michael J. Lepore, Assistant Physician, to study the problems of ulcerative colitis. This group as a committee, with Dr. Flood as Chairman, established the Ulcerative Colitis Clinic. This represented the crystallization of an ideal discussed for some years before—to have patients seen and studied by various disciplines in order to arrive at an optimum treatment with consideration of existing facilities. The Ulcerative Colitis Clinic has recently been pointed out by Dr. Joseph Snyder, Assistant Vice President in charge of Professional Services to Patients, as an ideal of cooperative treatment in which psychiatry becomes an integral part of the program.

Dr. Ruth E. Moulton, Assistant Physician, has completed the interviewing of 35 patients from the temperomandibular joint clinic. These interviews revealed much evidence of psychopathology as a significant factor in producing pain in the face and restricted motion in the temporal mandibular joint. The physiological mechanism involved appears to be muscle spasm, often maintained and exaggerated by the habit of bruxism.

In collaboration with the Anesthesiology Service, Drs. Edward Hornick, Assistant Physician, Harvey H. Corman, Assistant Pediatrician, and Mrs. Nettie Terestman, have studied psychiatrically 45 patients before and after their experience of anesthesia and surgery. The results of this study are now under analysis and will be presented for publication in the near future.

Dr. John Cederquist, Assistant in Psychiatry, is undertaking a long term investigation by psychoanalysis of several patients with multiple sclerosis, and a brief survey consisting of three or four interviews of as many patients with this illness as can be found. It is hoped to evaluate the personality and behavior patterns of individuals with this particular illness to determine if there is any significant consistence in the group.

Drs. Seymour Perlin, John A. Cook and Kathryn Prescott are conducting a survey of all (82) cases diagnosed as suffering from anorexia nervosa at the Presbyterian Hospital between the period 1945-1953. On the surgical services, Dr. Cook is studying those patients who have undergone a partial gastrectomy for peptic ulcer to compare the progress of those who are emotionally disturbed with those who present little evidence of such disturbance as recorded by the surgeons. In addition he is reviewing all surgical admissions from 1952 to the present time in whom a diagnosis of psychosis or psychoneurosis has been made.

The Service regretfully notes the retirement of Dr. John A. P. Millet. Dr. Perlin is on leave of absence with the United States Public Health Service. Dr. Paul G. Ecker, Assistant Physician, who had been on military leave of absence, resigned from the Service in order to assume his new position as

Assistant Professor of Psychiatry at the University of Pennsylvania Medical School.

Dr. Millet has accepted the directorship of the Rockland County Mental Health Center which is at present staffed by professionals on a voluntary basis. He has also accepted a place on a sub-committee of the Council, at the request of the Commissioner of Mental Hygiene, to consult on plans for development of new facilities for mentally ill children. Dr. Perlin participated on the Washington Heights Mental Hygiene Committee. Dr. Charles Hogan was one of the co-authors of the book, "Studies in Schizophrenia," published by the Harvard University Press. This past spring, Dr. Karush participated in a symposium of the American College of Physicians with Drs. George H. Humphreys II, and Flood, on peptic ulcer. Dr. Cederquist is working with the Child Educational Foundation. Dr. Hornick participated in the Post-graduate Assembly of the New York Society of Anesthesiologists in December. A case of amenorrhea showing psychohormonal interrelationship, by Dr. Ruth Easser, has been accepted for publication by Psychosomatic Medicine. Psycho-Physiological Correlations in Ulcerative Colitis, by Drs. Karush, Hiatt, and Daniels has been accepted for publication by Psychosomatic Medicine.

Aside from writing five papers and participating in many scientific and civic projects, Dr. Viola W. Bernard, Associate in Psychiatry, has acted as Chairman of the Mental Health Section of the Citizens' Committee on Children of New York City, Inc. The activities in 1954 centered especially on: Extension of community responsibility for the severely mentally retarded; critical analysis of the provisions of the Governor's Mental Health Construction Bond Act; consultation and planning with respect to the New State Community Mental Health Act. Dr. A. N. Miranda has been appointed Psychiatric Consultant at the Educational Clinic at Hunter College. Dr. Kolb has been appointed Chairman of the Committee on Psychiatry of the National Research Council, National Academy of Science.

The Vanderbilt Clinic had 54 psychiatrists in attendance from January to December 1954. Of these nine were assigned to the group clinic, five attended both group and regular clinic, 40 attended the regular clinic only. One psychiatrist attended three times per week, two attended twice per week and the remainder were in attendance once every other week. The total of hours given by psychiatrists approximated 6,741, with 1,812 hours devoted to the teaching of third year medical students. There were numerous changes in the staff during the year although the general organization of patient care remained the same. It is with regret that the retirement of Dr. Mary M. Thomson is recorded. Dr. Thomson devotedly contributed to the clinic since 1932. Dr. Solomon W. Ginsburg returned from a year's leave of absence in September but then resigned to join the faculty of the new Albert Einstein

Medical School as Clinical Professor of Psychiatry. Zygmunt A. L. Piotrowski, Ph.D., went on leave of absence in September 1954. Mrs. Stephanie Dudek returned to the staff in September, 1954, to provide the psychological services required by the clinic. Drs. David Abrahamsen, Herbert Bochm, Helen Boigon, Martha L. Gassmann, Eva Klein and James W. Watson left the staff during the year while Dr. Richard W. Burnett rejoined the staff. In addition, Drs. Bernard Gottlieb, Bernard Hecht, Francis D. Kane, Jane B. Oldden and Fred Tate joined the staff. Drs. John A. Frank and Eda L. Priest went on leave of absence. Elizabeth R. Lyon, psychiatric social worker, left the staff in December 1954.

Under the direction of Dr. McGraw and his teaching staff of 17 physicians, including Drs. Alan B. Adam, Bruch, Ralph J. Carotenuto, Hyman Chartock, Lilli Cobliner, Roy D. Craig, Ginsburg, Renatus Hartogs, Lawson G. Lowrey, Hugh McHugh, Robert J. Mearin, John F. Oliven, Alfred Schick, Martin Schreiber, Sonia S. Stirt, Edward S. Tauber and Jacob Weinless, the 3rd year medical students were instructed in the process of interviewing, diagnosis, and treatment of selected representative psychiatric cases on Wednesday and Friday mornings throughout the teaching semester. Dr. William A. Schonfeld has directed the instruction of child psychiatry with the assistance of Dr. Thomson until her retirement, and with Dr. Watson until his resignation. Following these losses Dr. Schonfeld's associates were Dr. Percy E. Ryberg, Dr. David M. Rudin, and Mrs. Sandor Lorand.

Dr. Hugh Mullan continues his group psychotherapy. Dr. John J. Levbarg, who has provided hypnotherapy, demonstrated the use of this technique in the mirror room. This room was also utilized for instruction in conducting interviews with adult patients, demonstrating play therapy with children, and the techniques of psychological testing.

Through the generosity of Mr. Robert B. Smithers and the remainder of a grant from the Charles E. Culpeper Foundation, the Psychiatric Service in Vanderbilt Clinic, has benefited by the establishment of a special fund.

Drs. Fred Tate, Edith M. Buyer and Miss Lyon undertook an investigation to determine the effectiveness and function of psychiatric diagnostic interviews during the year. The group formed a "distributing clinic" with the special function of referring and providing guidance for any patients who needed assistance to obtain the proper and appropriate type of psychiatric help for their particular problems. The results of this experience indicate that there is a need for such a psychiatric referral service even though the number of resources to which the patient may be sent is limited.

From the Pediatric Psychiatric Clinic, Dr. Langford reports that collection of data for the Child Accident Research Study is completed. Publication of the analysis of the psychological test material as well as the personality profiles of the non-accident and accident children is expected in the future.

This investigation has been supported by a grant to the Hospital from the Metropolitan Life Insurance Company.

Dr. Virginia N. Wilking, Assistant Pediatrician, has held a National Foundation for Infantile Paralysis clinical fellowship in psychiatry for the current year to study the emotional reactions of patients with physical handicaps.

The clinic has continued to give clinical psychiatric service to children from the pediatric wards and out-patient department and to provide the psychiatric consultations which have been requested. The pediatric residents rotate through the clinic for a period of orientation in the psychological aspects of pediatric practice.

Radiology

HAROLD W. JACOX, M.D., *Acting Director*

Under a new plan of organization passed by the Board of Trustees in April 1954, the Radiology Department in the University and the Radiological Service in the Hospital will be conducted as a strictly full-time academic department devoted to patient care, research and teaching. There will be an adequate staff, both professional and non-professional, research laboratories and a research budget. The Executive Officer of the Department in the University will have a seat on the Faculty of Medicine and will be a member of the Committee on Administration, and as Director of the Radiological Service in the Hospital will be a member of the Medical Board and of the Executive Committee of that Board.

The loss by retirement of Dr. Ross Golden, who had been Director of the Radiological Service for the past 32 years, was keenly felt. He became Visiting Professor of Radiology at the new Medical School of the University of California at Los Angeles.

During the year four new residents were appointed, Drs. Robert A. Evans, Robert Hockstim, Rob H. Kirkpatrick and James M. Monaghan. Dr. Donald W. Johnson, whose residency was interrupted by military service, returned in November to complete his training. Dr. Walton W. Hamilton, upon completion of his residency in December, will enter the Armed Forces.

Dr. Alfred S. Berne, Assistant Radiologist, resigned to accept an Assistant Professorship at Syracuse University. Dr. Franklin Reed, Jr., resigned to become Director of Radiology at the Morristown Memorial Hospital, Morristown, New Jersey. Dr. Charles Royer resigned and is now associated with Dr. Raymond Healey, one of our former Assistants, at the Mountainside Hospital, Montclair, New Jersey. Dr. R. G. Bjorn Bjornson tendered his resignation as Assistant Radiologist, to return to his former work in orthopedic surgery. Dr. Anna Silverman, Assistant Radiologist, has resigned to go to England. Dr. Anthony Galgano resigned to accept a hospital position in the State of Washington.

Drs. Meyer Alpert, Donald J. Barnett, Joan Eliasoph, J. Luther Jarvis, Ralph Schlaeger and Robert H. Freiberger joined the staff as Assistants. Drs. Robert G. Bogen, Julian Mandell, Norah duV. Tapley and Jerome Nadelhaft, former Residents, were appointed Assistants. After completing a three year training with the United States Public Health Service Hospital, Staten Island, New York, Dr. Fred Thyng was awarded a fellowship here for a period of one year. Dr. Ahmet Rehai Islam concluded his three year's train-

ing, successfully passed the Board of Radiology examinations and departed for Saudi Arabia, where he will practice radiology.

Heinz Oeser, Professor of Radiology of the Free University of Western Berlin, was a Visiting Fellow on the Columbia exchange professorship program supported by the Ford Foundation. Dr. Jo Kian Tjaij of the Civil Central Hospital of Djarkata, Indonesia, was a Visiting Fellow in Pediatric Radiology sponsored by the Foreign Operations Administration of the Department of Health, Education and Welfare. Other foreign observers from Italy and South America spent from four to six weeks on the Service.

Dr. Harold W. Jacox was appointed Acting Executive Officer of the Department of Radiology in the University, and Acting Director of the Radiological Service in Presbyterian Hospital on July 1, 1954. He became President of the New York Roentgen Society in June. He continues as an abstractor for Excerpta Medica, Editorial Consultant to Radiology, and co-editor with Dr. Morton M. Kligerman of the Radiation Therapy Section of the Year Book of Radiology. He was appointed Consultant in Radiation Therapy to the Veterans Administration as a member of the Deans' Committee, and continues as a Consultant in Radiology to the Surgeon General of the Army. He was appointed a member of the Committee on Radiological Health in the Radiological Society of the State of New York. He gave lectures at a regional American Cancer Society meeting in Atlanta, Georgia, on cancer of the breast and lung; on cancer of the uterine cervix at Wayne University in Detroit, and was guest lecturer of the University of Kansas at a Post-Graduate Symposium at Kansas City. He participated in the Eastern Conference of Radiologists and in the annual meeting of the American Roentgen Ray Society both of which met in Washington, D.C.

Dr. John Caffey was promoted to Professor of Radiology and Attending Radiologist. He participated in many extramural professional activities during the year which included: guest lecturer, Post-Graduate Symposium at the University of Kansas during February; guest lecturer, Texas State Radiological Society at Dallas; Visiting Pediatrician-in-Chief to the Boston City Hospital, giving annual lectures to house officers. He also conducted a round table on pediatric radiology at the annual meeting of the American Academy of Pediatrics in Chicago, where he also served as panel member on the symposium on pediatric surgery. He was also visiting lecturer on Congenital Dysplasia of the Hip to the Intermountain Pediatric Society, and gave a second lecture on the Radiological Features of Congenital Megacolon to the Utah State Radiological Society in Salt Lake City. He was guest lecturer of the Association for Research in Nervous and Mental Disease at their meeting in New York City.

The Harkness Pavilion X-ray Department is functioning well under the supervision of Dr. Josephine Wells, who was promoted to Assistant Attending

Radiologist and Associate Professor of Radiology. Dr. Wells has continued work with Dr. Charles A. Flood, Associate Attending Physician, and Dr. Daniel C. Baker, Jr., Associate Attending Otolaryngologist, on the esophagus. A paper by these three authors on simple heartburn has been accepted for publication in Gastroenterology for January 1955. Dr. Wells continues to give X-ray conferences to the Faulkner Arthritis Clinic, and has worked with Dr. T. Lloyd Tyson, Assistant Physician, on osteitis pubis, and Dr. Baruch S. Blumberg, Assistant Physician, on a study of rheumatoid spondylitis. A survey of gastrointestinal studies done over 5 years ago is being continued with Dr. Tapley. A review of infections of the small intestine started by Dr. Golden is being finished by Dr. Wells. Dr. Wells is serving as the X-ray representative on the Cardiovascular Teaching Committee headed by Dr. Dickinson W. Richards, Jr., Attending Physician, and is the X-ray representative on the Staff Committee.

Dr. Ralph Schlaeger is reviewing our results with intravenous cholangiography. Dr. Catherine J. Dalton and Dr. Solomon S. Schwartz presented a paper entitled Abnormalities of the Paraspinal Shadow in the Thorax before the Kings County Radiology Society, and also the Radiological Society of North America at Los Angeles.

Dr. Russell Wigh was promoted to Associate Professor of Radiology and to Assistant Attending Radiologist. He is in charge of the diagnostic department of the wards and clinic of The Presbyterian Hospital. He participated in a panel discussion of the New York Academy of General Practice in Syracuse. He is collaborating with the Department of Urology in the development of a new technique for differentiating between benign and malignant conditions of the kidney. Dr. Wigh participated in a panel at the meeting of the New York Roentgen Society, discussing angiocardiography.

Several members of the staff, including Doctors Golden, Wigh, Kligerman, Taveras and Jacox, participated in the colored television clinics sponsored by the New York City Cancer Committee of the American Cancer Society.

Drs. Wigh and Eleanor D. Montague presented a paper on Evaluation of Intrapulmonic Adenopathy in Sarcoidosis at the annual meeting of the Radiological Society of North America at Los Angeles. He, together with Dr. Joseph C. Shipp, Assistant Resident in Medicine, and Dr. Leonard V. Crowley, Assistant Resident in Pathology, prepared a paper on Aortic Sinus Aneurysm, which will be published in the American Journal of Medicine.

Dr. Gerhart S. Schwarz, Assistant Professor of Radiology, with Dr. James B. Campbell, Assistant Attending Neurological Surgeon, and in collaboration with Dr. Svein Boyesen, is working on a project which involves the taking of rapid sequence radiographs in a study of innervation of the urinary tract from the urethra to renal pelvis in animals, sponsored by a grant from the Surgeon General of the Army and Playtex Park. Dr. Schwarz has

published three papers: A Simplified Method of Correeting Roentgenographie Measurements of the Maternal Pelvis and the Fetal Skull, whieh appeared in the Amerieaan Journal of Roentgenology; The Use of Conventional Depth-Dose Tables in Divided-Port X-ray Therapy in Radiology; and Large Radiolueent Gall Stones, whieh appeared in Medieal Radiography and Photography. He has eonstrueted a new deviee for measuring eireumferenees on radiographs whieh is partieularly helpful in doing eephalo-pelvimetry on wet films.

Dr. Samuel H. Madell, eollaborating with Dr. Golden, presented a paper on The Ileum Following Coleetomy at the annual meeting of the Radiologieal Soeiety of North Ameriea at Los Angeles. Dr. Galgano's paper, Unusual Features in Multiple Myeloma, was aeeepted for publieation in the Amerieaan Journal of Roentgenology, Radium Therapy and Nuelear Medieine. Dr. Alpert's paper on the Opaeifieation of a Caleified Leimyoma during Hysterosalpinography was published in the Journal of the Canadian Assoeiation of Radiologists. Drs. Nadelhaft and Kent Ellis are working on a statistieal study of a series of normal neo-natal ehest roentgenograms. Dr. Nadelhaft and Dr. Arthur Purdy Stout, of the Surgieal Pathology Department, are preparing a paper on a study of salivary gland tumors treated at the Presbyterian Hospital.

Dr. Morton M. Kligerman, who has been promoted to Assistant Attending Radiologist, has been appointed eo-editor of the Year Book of Radiology. He and Professor Howard Vreeland of the Sehool of Engineering of Columbia University, presented to the Amerieaan Radium Soeiety Meeting a paper on Praetieal Adaptation of Graphies in Loealizing Radium Implants. He leetured to the Roehester Roentgen Ray Soeiety on Rotation Teehniques Applieable to Standard Deep Therapy Maehines, and spoke before a student group of hospital administrators at the Sehool of Publie Health, Columbia University, on Radiologist-Hospital Relations. Dr. Kligerman, in eonjunetion with Dr. Edith H. Quimby, Professor of Radiology, and Elaine G. Rosen, published a paper on Rotation Therapy Teehniques Applieable to Standard Deep X-ray Maehines. A paper entitled, A Graphieal Method for the Loealization of Radium Sourees for Dosage Caleulation, by Dr. Kligerman, Professor Howard Vreeland and Jan Havinga, was aeeepted for publieation in the Amerieaan Journal of Roentgenology. Dr. Kligerman partieipated in the meeting of the Amerieaan Radium Soeiety at Hot Springs, Virginia, and leetured to the Radiotherapy Group at the Roehester Roentgen Ray Soeiety Meeting, Roehester, New York.

A speeial grant from the Amerieaan Caneer Soeiety through Columbia University has provided for the purehase of a Bomke Instantaneous Dosimeter, an unusually sensitive radiation dose meter. Dr. Kligerman with Dr. Virginia Kneeland Frantz, Professor of Surgery, under a grant from the

United States Public Health Service, is cooperating on the Study of Carcinogenesis in the Thyroid of the Long Evans Rat from External and Internal Radiation. Drs. Madell, Kligerman, Quimby and David Habif of the Department of Surgery, are continuing a study on the Possible Detection of Metastasis in the Liver (pre-operatively) by the use of Radioactive Iodinated Human Serum Albumin.

Dr. Juan M. Taveras, Assistant Attending Radiologist, with Dr. Edward B. Schlesinger, Attending Neurological Surgeon, presented a paper on the Relation of Thrombosis of the Internal Carotid Artery with Some Forms of Cerebral Atrophy at the meeting of the American Neurological Association held in Atlantic City. Dr. Taveras in collaboration with Dr. Ernest H. Wood, a former Associate Professor of Radiology, and Dr. Lester A. Mount, Associate Attending Neurological Surgeon, presented a paper on the Value of Radiotherapy in Treatment of Optic Nerve Gliomas at the meeting of the Neurosurgical Society of America held in Michigan. Lectures were given by Dr. Taveras at the Academy of Medicine before the Pediatric Society on Roentgen Findings in Cranial and Cerebral Trauma in Infants and Children, and at the Brooklyn Women's Hospital on Roentgen Findings of Traumatic Lesions in Children. In the Transactions of the American Neurological Association he published two articles; one on a Study of the Collateral Circulation of the Brain Following Ligation of the Internal Carotid Artery for Intracranial Aneurysms, with Dr. Mount; the other was on Factors in the Production of Cauda Equina Syndromes in Disc Herniation, with Dr. Schlesinger. In the journal, Radiology, he published a paper with Dr. Mount, on Arteriographic Demonstration of External-Internal Carotid Anastomosis through the Ophthalmic Arteries; and another with Drs. Wood and Berne on the Value of Radiation Therapy in the Management of Intrinsic Tumors of the Spinal Cord.

Enlargement of all facilities in the Neurological X-ray Department is under study. The need has become more acute with the marked increase in the number of cerebral angiograms, and development of new diagnostic techniques.

There are two separate activities of the Radiological Research Laboratory: the research project for the Atomic Energy Commission, and problems allied with therapeutic radiology and with medical uses of radioactive isotopes.

The research project for the Atomic Energy Commission under the direction of Dr. Gioacchino Failla consists of two parts; one concerned with radiologic physics, and the other with radiobiology. These studies employ most of the time of Dr. Roberts Rugh, half that of Dr. Harald H. Rossi and a considerable technical and clerical staff. The work in radiologic physics involves the development of new methods of measuring (1) radioactive

isotopes and (2) tissue doses in terms of energy absorbed per gram of tissue under various conditions and for all forms of ionizing radiation. The work in radiobiology involves the study of the biological effects of ionizing radiation of particular interest to the Atomic Energy Commission. A full report of the work of the project has been issued by the Atomic Energy Commission as Document NYO-4582.

Physical aspects of radiotherapy problems have received a great deal of attention. Dr. Rossi has been transferred from full-time in radiological research to half-time there and half-time in X-ray therapy. Two members have been added to the physics staff, Mr. Francis de Friess as hospital physicist and Miss Ginette Jacob as physics assistant.

The Hospital received from the United States Public Health Service a grant for the purchase of a 23,000,000 Volt betatron for the treatment of cancer and allied diseases. A building to house the betatron is under construction. This is now nearing completion and the betatron should be installed in the spring of 1955. Planning of radiation protection in the building and of the treatment table has been carried out by Dr. Failla. Dr. Rossi has planned the auxiliary laboratories and equipment.

Dr. Quimby has continued work on studies of dosage problems in X-ray and radium therapy, in cooperation with the clinical radiologists. This has been supported by a grant from the American Cancer Society, which has been renewed for the coming year.

The radioisotope laboratory, under Dr. Quimby's direction, continues to receive and standardize all radioactive isotopes of iodine, phosphorus, gold, sodium and potassium, and dispense them to clinical and research departments. Regular diagnostic and therapeutic procedures are carried out in conjunction with the Medical, Surgical and Radiological Services. The reports from the various departments will contain information regarding their routine and research projects involving radioactive isotopes. The laboratory cooperates with members of the clinical staff and others in new researches involving the use of radioactive isotopes.

For the past three years the Hospital and College have been functioning under a general authorization for the use of radioactive isotopes. Under this authorization projects for the use of these substances are not subject to review by the Atomic Energy Commission Subcommittee on Human Applications of the Advisory Committee on Isotope Distribution. Instead, the necessary review is done by the Columbia-Presbyterian Isotope Committee. Over 100 applications have been received and reviewed during the past year. All have received authorization, sometimes after some modification of the request.

Dr. Failla has continued active in work with the Atomic Energy Commission and other government agencies, both civilian and military, on problems

related to atomic energy. He is a member of the Advisory Committee for Biology and Medicine of the Atomic Energy Commission, and Consultant to several of Atomic Energy Commission installations. He is Chairman of the Radiation Panel of the Armed Forces Special Weapons Project; Chairman of the Visiting Committee for the Medical Department of the Brookhaven National Laboratory. Dr. Failla is also a member of the International Commission on Radiological Units, the International Commission on Radiological Protection, the National Committee on Radiation Protection, and Chairman of corresponding subcommittees of the two protection organizations. His subcommittee on Permissible Dose from External Sources of Ionizing Radiation, under the National Protection Committee, issued Handbook 59 dealing with permissible limits of exposure. Dr. Quimby was Chairman of the Advisory Committee on Isotope Distribution of the Atomic Energy Commission until midsummer, and was then, at the expiration of her term, reappointed to membership. She is also a consultant for the American Medical Association and the Veterans Administration; an examiner for the American Board of Radiology, and on the editorial advisory boards of Radiology, Cancer and General Practice. Dr. Rossi is chairman of the Sub-Committee on "Neutrons" of the National Committee on Radiation Protection.

Dr. Failla and Dr. Quimby continue to be members of the Sub-Committee on Graduate Instruction for work in Biophysics. The residents in radiology continue to devote some time during their final year to work in the radiological research laboratory, for the special purpose of obtaining some familiarity with radioactive isotope procedures.

Dr. Quimby was President of the American Radium Society during its annual meeting in March, a signal honor. The subject of her presidential address was, The Clinical Radiation Physicist, a Specialist within the Field of Radiology. Dr. Failla was President of the Radiation Research Society during its annual meeting in May. His address was on Air Equivalent and Tissue Equivalent Ionization Chambers.

Drs. Failla, Quimby, Rossi and Rugh have appeared on programs of national and local radiological, medical, physical and other societies and have given a number of lectures to medical and lay audiences. Several papers have been published during the year by members of the laboratory staff; others are in preparation or awaiting publication.

An attempt is being made to carry on Dr. Golden's training program for residents in radiology which has achieved worldwide reputation. The number of residents should be increased from twelve to at least eighteen, because of the shortage of radiologists and the large number of excellent applicants for training. At the present time we are unable to accommodate the several promising young radiologists who request training here each year.

The following are the statistics of the work of the Radiological Service for 1954:

In the Harkness Pavilion diagnostic division there were 24,877 private patient visits, a decrease of 255 over 1953, but there was an increase of 207 fluoroscopic examinations which are more time-consuming for radiologists. In the third floor diagnostic division for ward and clinic patients, 57,795 patient visits were recorded, an increase of 1,327 over 1953, which also includes a substantial increase in the more complicated procedures.

At the Neurological Institute, 8,199 patient visits were registered for diagnostic procedures, 680 more than in 1953. At the Babies Hospital, 9,381 patients were examined, an increase of 409 over 1953. At the Squier Urological Clinic, 4,335 patients were examined, a decrease of 447 from 1953. At the Institute of Ophthalmology, 657 patients were examined, 89 less than 1953. In summary, a total of 105,244 patient visits were made in 1954 for diagnostic services in the various divisions, as opposed to 103,619 in 1953. The figures show a slight increase in the past 3 years. The overall number has not changed much, but more complex examinations such as cerebral angiograms, angiocardiograms, laminograms, and cholangiograms have increased considerably.

In Radiotherapy, 6,565 X-ray treatments were given to 651 private patients in Harkness Pavilion, a decrease of 10 from 1953; 515 follow-up visits were made; 5,243 treatments were given 414 ward and clinic patients, a decrease of 61 from 1953, but there were 2,038 follow-up visits, an increase of 50. At the Neurological Institute there were 315 new patients and a total of 5,609 patient visits, an increase of 17 patients over 1953. At the Institute of Ophthalmology, 64 new patients received 542 treatments. Radium treatments were given 162 times to 150 patients. Radioactive isotope service was given to 2,528 private and clinic patients for both diagnosis and therapy. A total of 17,680 treatments were given to 2,102 patients, which represents a decrease of 1,970 treatments, and an increase of 396 patients.

Mr. Wm. Lynett has been a very helpful addition to the Department as Administrative Assistant. A fresh approach to many administrative problems has been welcome and useful to the Radiological Service.

I wish to express my appreciation to the attending, resident and nursing staffs and to all non-professional personnel for their loyal support during the year. I also want to thank the Board of Trustees, the Administration and the Medical Board for their assistance.

Surgery

LAWRENCE W. SLOAN, M.D., *Acting Director*

Against a general background of far-reaching changes in medical practice, the Surgical Service renders its Annual Hospital Report. The growth of voluntary insurance coverage, workmen's compensation, and the programs for medical and surgical care of the armed forces have modified the manner, but have not yet changed the basic concepts of the training of physicians and the practice of medicine in the Hospital. Today, however, they produce our major problems. The quality of medical service depends upon the solutions that are found.

It should be recorded also that changes within the surgical field itself are strongly modifying the training of surgeons and the practice of surgery in the Hospital. The close approximation to the clinical services of the blood bank and the laboratories of bacteriology, pathology, and chemistry, initiated by and fostered under Dr. Allen O. Whipple, has grown into a large experimental program, many of the activities of which bear directly upon the care of the patient. It cannot be denied that this increased emphasis on the physiological aspects of surgical procedures is desirable, and yet this, together with an increase in cancer surgery, thoracic surgery, and cardiovascular surgery has inevitably created other problems closely related to those created by insurance programs, and by the requirements of the military services. For many reasons, these changes have affected the Surgical Service more profoundly than they have most of the other services. Solutions as to how intern and resident training can be provided and maintained at a high level of performance are being sought urgently within the Service, in cooperation with other services, and with the University.

Relationships with the affiliated surgical services at Bellevue, Delafield, Mary Imogene Bassett, Roosevelt, St. Lukes and Mount Sinai Hospitals are being reviewed with some of these problems in mind in an attempt to fulfill the objectives of graduate training, particularly by utilizing more fully the special facilities of these services and the talents of the surgeons on their staffs. Such changes as might be made could not only add to the experience of the interns and residents, but could ease some of the pressure on the facilities at the Medical Center.

Staff Activities

Leaves of absence were granted Dr. George H. Humphreys II, Director of the Surgical Service, and Dr. Raffaele Lattes, Director of the Department

of Surgical Pathology, each for six months. Dr. Humphreys' primary interest in the clinics abroad was in cardiovascular surgery—diagnosis, anesthesia and techniques. At the present time rapid developments are being made in all these fields. In angiocardiography especially, the Medical Center, like other institutions, is searching for a way to coordinate the activities of the various groups interested. Careful consideration must be given to the method of setting up such a Hospital service because the techniques used in the studies employ so many professional skills. For Dr. Humphreys to visit with the men and see the work they are doing in this and other related fields of cardiovascular surgery abroad was almost crucial for the Service at this time. The performance of some of the most difficult heart operations, the necessity for better exposure, and more accurate and painstaking (and therefore lengthier) dissections in cardiac and blood vessel surgery have taxed the ingenuities of surgeons and anesthetists. Intra and extra-corporeal shunts to leave the heart bloodless during the operative procedure, hypothermia by body cooling and by pharmacological techniques, the replacement of segments of blood vessels, large and small, because of injury or disease by grafts either from human beings or artificially made of plastic fabrics: these are relatively new developments in surgery in which there is constant change at the present time. To keep abreast of the important surgical and technical advances being made with any degree of clear perspective is a challenge to those in this field and of great importance in planning and equipping Hospital facilities.

Dr. Humphreys visited sixteen universities and thirty-five teaching hospitals in Scotland, England, Sweden, Denmark, France, Switzerland, Italy, Lebanon, Syria and Iraq. This afforded a unique opportunity not only to study the organization of hospital teaching services of a wide variety, but also to discuss mutual problems with other professors of surgery, as well as observe technical advances and research interests in many fields.

In Edinburgh, London, Copenhagen, Turin and Beirut, it was gratifying to meet men trained on the Surgical Service of the Presbyterian Hospital who are now well established and doing credit to their American training.

In Stockholm a paper was presented on invitation of the Swedish Surgical Society. In Lund, Sweden, a teaching film made at Presbyterian Hospital was presented, on invitation, to the Faculty of Medicine of that University. In Turin, Italy, Dr. Humphreys presented three teaching films in cardiovascular surgery to the Societa Piemontese di Chirurgia. The trip to Asia Minor was made under the auspices of the United States Information Service and included a series of lectures, moving pictures and clinical demonstrations in Baghdad, Damascus, Tripoli and Beirut. While staying at the American University in the latter, he was entertained by Dr. Joseph MacDonald who resigned from Presbyterian Hospital in September, 1953, to

accept the post of Dean of the Faculty of Medicine. Here he met by chance Dr. Whipple who was returning from a visit to Dr. Robert B. Hiatt in Shiraz.

On the occasion of his sabbatical leave, Dr. Lattes accepted a Fulbright Senior Lectureship, and was assigned to the University of Turin Medical School in Turin, Italy, where he gave a postgraduate course on The Surgical Pathology of Tumors, from October 1, 1954, to December 15, 1954. This course consisted of eighteen lectures and was attended by University and Hospital attendings from the Departments of Surgery, Radiology and Pathology. Some of the lectures were also attended by orthopedic surgeons and gynecologists. This course included a detailed description of the diagnostic services of the laboratories of Presbyterian Hospital in New York, and of the close collaboration between clinical and laboratory services in the American hospitals. In addition to this, Dr. Lattes also accepted an invitation to deliver three lectures at the University of Parma, two lectures at the University of Bari, and one at the Medical Society of Milan.

Before going to Italy, Dr. Lattes visited the diagnostic and scientific laboratories of the Departments of Pathology at the Royal Cancer Hospital in London, the University of Leeds, and the Radium Hemmet in Stockholm.

During the absence of Dr. Humphreys and Dr. Lattes, Dr. Lawrence W. Sloan was in charge of the Surgical Service and the Department of Surgery, and Dr. Virginia Knecland Frantz was in charge of the Department of Surgical Pathology.

Leave was granted Dr. Margaret R. Murray to attend the meeting of the Eighth International Congress of Leiden, and to present two papers at these meetings. She also visited centers interested in various aspects of tissue culture and cell physiology in England and on the Continent. During, and because of her leave, the Department of Surgical Pathology became more aware than ever of the value of her contribution to the diagnosis of obscure tumors.

In addition to his duties as Director of Surgery at the Delafield Hospital, and Professor of Clinical Surgery in the University, Dr. Arnold J. Kremen has sought an ever closer relationship between the surgical activities at Delafield and at Presbyterian. His experience in head and neck surgery has been utilized in the training of residents. Quite rightly, he sees the surgical problems of neoplastic disease at the Medical Center, as a coordinated whole on a University level from the standpoints of patient care, residency training, and research.

Staff Changes

On July 1, 1954, Dr. Jerome P. Webster retired as Director and was appointed Consultant to the Division of Plastic Surgery. This Service, organized by Dr. Webster, became outstanding for the quality of its work and excellence

of training it provided its residents and the members of the general surgical house staff. A remarkable contribution to medical literature was created by Dr. Webster during his period of directorship—the Library of Plastic Surgery bearing his name. It is probably the foremost collection of books in the world dealing with the subject of his special interest. Dr. Thomas William Stevenson, Jr., Dr. Webster's first resident, was appointed to succeed him and took charge on July 1st with the accompanying titles of Attending Surgeon in the Hospital and Professor of Clinical Surgery in the University.

On July 1, 1954, Dr. John F. Prudden returned from military service leave of absence. On January 1, 1954, Dr. Frederic P. Herter was appointed an Assistant Attending Surgeon. He was also assigned to Service in Presbyterian Hospital and to the Delafield Hospital, where he is collaborating on the study of chemotherapy of solid tumors.

Dr. Con Amore V. Burt, Assistant Clinical Professor of Surgery and Assistant Attending Surgeon, resigned April 15, 1954, after 20 years' helpful association with the Service. Dr. Burt continues in the practice of surgery associated with St. Clare's Hospital in New York City.

Dr. Robert B. Hiatt was given a two years leave of absence from June 1, 1954, to June 1, 1956, from Presbyterian Hospital to become Director of Surgery of the Nemazee Hospital at Shiraz, Iran. His chief operating room nurse is Miss Ethel Silfes, recently of the operating room staff at Presbyterian.

We record with deep regret the death on November 1, 1954, of Dr. Louis Bauman. One of the fundamental concepts of a university department of surgery was realized under Dr. Whipple's professorship by establishment of the laboratory headed by Dr. Bauman. The gap between the basic medical sciences and the clinical practice of surgery was bridged by incorporating within its organization the laboratories of pathology, bacteriology and chemistry from which the present clinical and experimental laboratories have developed. In 1922, Dr. Bauman was asked to organize the chemistry laboratory and was assigned as a medical consultant to the Surgical Service for this purpose. He remained in charge of the laboratory until his retirement in 1946. Research was carried out on the constituents of bile and pancreatic secretions. A monograph on pancreatic physiology and abnormalities of pancreatic function resulted from this work. He was a close medical consultant on many clinical problems, chiefly those dealing with surgical diabetic patients prior to the advent of antibiotic therapy. For many years also, his laboratory was responsible for the preparation of the intravenous and subcutaneous fluids used throughout the Hospital. Seeing the "medical" implications of surgical problems and at the same time understanding the surgical point of view, his counsel and assistance were constructive, stabilizing and always valued. His devotion to this broad aspect of medicine, his

insistence on adherence to facts, and his patient, methodical tenacity in seeking the answers to medical problems, characterized his work. A Memorial Fund for the support of further research in surgical problems has been established in his name by his friends and colleagues.

The Surgical Service lost another devoted friend and assistant in the death of Mr. Nicholas Kusch on September 30, 1954. Mr. Kusch had been a technician in the Surgical Pathology Laboratory for twenty years. He was a colorful individualist whose standards were uncompromising and whose workmanship was outstanding.

Extra Mural Activities

On February 25, 1954, the Surgical Service was host to the Wisconsin Surgical Club. In the morning an operative clinic was held followed by inspection of the laboratories of cancer research, metabolic studies, cardiovascular physiology, surgical pathology, wound healing, surgical bacteriology, electrogastrogram studies, and experimental surgery. In the afternoon papers on clinical subjects were presented by members of the attending staff.

Timed to correspond with the spring Presbyterian Hospital Alumni meeting, a program by alumni of the Service was presented on April 9, 1954, with Dr. Whipple, Professor Emeritus and former Director, presiding. The interesting activities of these former members of the surgical staff are reflected in the subjects presented. Dr. Caldwell B. Esselstyn gave an account of the development and experience of a clinical group in Hudson County, New York State, known as the Rip Van Winkle Clinic. Dr. Jose Noya Benitez, Director of Surgery at the University of Puerto Rico, described the organization and activities of his department. Dr. Louis M. Rousselot, Director of Surgery at St. Vincent's Hospital in New York City, outlined the program of his service, noting its relation to the newly organized New York-Bellevue University program. Dr. Thomas Randall, Director of Surgery at Memorial Center in New York City, reported some of the fundamental and clinical studies which have been undertaken by him and his staff in recent months. (Dr. Randall, it should be recorded with gratitude, has maintained a very close contact with the Service at Presbyterian Hospital in teaching conferences on fluid and electrolyte studies with our residents, in addition to carrying his very busy schedule at Memorial.)

Honors and distinctions have come to several of the members of the Surgical Service during the past year. Besides the distinction implicit in the invitations to lecture, conduct courses and present scientific papers abroad tendered Dr. Humphreys, Dr. Lattes, and Dr. Murray; Dr. Humphreys was elected President of the New York Society for Thoracic Surgery and Chairman of the Section on Cardiovascular Surgery of the American Heart Association.

Dr. Webster was elected Vice-President of the New York Academy of Medicine. Dr. Webster's interest in and contributions to the history of medicine have been reflected by the activities and offices he has held in the Section on Historical and Cultural Medicine. This year the American Association of the History of Medicine awarded to Mrs. Martha Gnudi and Dr. Webster the William H. Welch Medal "for particular contributions of outstanding scholarly merit in the field of medical history" for their book "The Life and Times of Gaspare Toglicozzi, Surgeon of Bologna—1545-1599," published in 1950.

Dr. Arthur Purdy Stout was elected Chairman of the Subcommittee on Oncology of the National Research Council, made an Honorary Member of the Mexican Association of Pathologists, and presented the Clement Cleveland Award of the New York City Cancer Committee. He has participated in conferences, seminars, and teaching sessions in many medical schools and medical meetings throughout this country and in Canada, and has been called frequently in consultation by the Armed Forces Institute of Pathology and the Walter Reed Hospital in Washington, D. C.

Although retired from his teaching position in the medical school, Dr. Stout is a very active consultant of the Department of Surgical Pathology. His contributions to the Department of Surgery cannot easily be measured. They are represented best, perhaps, in the diagnosis and management of tumors of obscure origin of potentially serious prognostic import; by his conferences and contacts with the residents, and by his assistance to members of the surgical staff. His contributions to medical literature, alone and in collaboration with others, continue to show the same interest in and relationship to living pathology that has characterized his other studies. Fortunately, it has been the great good fortune of the Department of Surgery to be close to a laboratory in which this point of view is traditional.

Dr. Frank L. Meleney, Attending Surgeon and Professor of Clinical Surgery, was invited to prepare a review of the progress in the control of surgical infections over the last fifty years for the January (1955) issue of "Surgery, Gynecology and Obstetrics." It is the first in a series of twelve articles reviewing the progress of surgery during the preceding half century, and was prepared as part of the celebration of the fiftieth year of publication of that journal.

Dr. William Barclay Parsons was elected to the Board of Directors of the New York Chapter of the American Red Cross assigned to the Blood Program of the General Advisory Committee.

Dr. George F. Crikelair, while with the Navy on leave from the Division of Plastic Surgery, was named plastic surgeon for the care of men injured in the Bennington disaster. He supervised the care of many of these badly burned and injured men from the acute phase of their injuries through the

reconstructive phase.

Dr. John Scudder officially represented the Presbyterian Hospital at the seventh annual meeting of the American Association of Blood Banks in Washington, D.C., September 13th to 15th, 1954, and took part in the discussion of the treatment of hemolytic transfusion reactions. He has also served on the Blood Bank Commission of the New York State Medical Society and on the Blood Transfusion Committee of the County of New York.

Dr. Milton R. Porter was appointed a Consultant in Cancer Surgery to the United States Navy at St. Albans Hospital.

Dr. Rudolph N. Schullinger was named a charter trustee of Princeton University on October 22, 1954.

A Twenty-Five Year Report of the Department of Surgery, which had been prepared in 1953 by Dr. George Humphreys to mark the quarter century anniversary of the Columbia-Presbyterian Medical Center, was published during the summer of 1954 and sent to all the alumni of the Service. The report was prepared with the assistance of members of the staff who have charge of the various departmental activities at the present time, most of whom have participated in the development of these activities or have directed them.

Patient Care, Teaching and Research

The activities of the Service have continued without major changes in organization throughout the past year. The division of the ward attending, house staff, and teaching assignments into three services has continued to function satisfactorily. Frequent revaluation of the training program must be made because it never has and never can remain static. It must be capable of modification to suit the ever changing requirements of surgical practice. At the present time the problem is acute in two areas: first, the basic training of surgeons in the face of the present state of confusion which characterizes the medical personnel requirements of the armed forces; and second, the adequate training of surgical specialists, particularly those who in the future will do the surgery of the thorax, heart and blood vessels. At the moment, the second problem is closely related to the first, especially as it concerns the quality of surgery which will become available to our armed forces. It is also an important concern of our own in planning the training program for our residents. The matter is being given much thought.

An extension of the coverage of ward patients by the three services to the clinics also is under consideration. The coincidental alleviation of some of the pressure in the operating room is one of the desiderata it is hoped may be achieved by such an arrangement.

The teaching of second, third and fourth year medical students on the wards and in the clinics remains essentially the same as before. There are

fewer fourth year clerks on the wards for longer periods of time, which permits the students to become closer members of the Service teams. This arrangement pre-supposes a somewhat wider distribution of the teaching load to affiliated services. Although these services are autonomous, an attempt is being made to establish a basic teaching pattern with preceptorships, and much individual apprenticeship and small group conference type of instruction predominating.

A patient care committee made up of head nurses and the resident house staff, under the chairmanship of Dr. Schullinger, meets frequently. Ways should be found for more effectively disseminating the findings and recommendations of this committee for the purposes of inculcating in new nurses and interns the principles of good patient care, the appraisal of new procedures and equipment, and the resolution of differences of opinion which inevitably arise between services in the handling of patients. The usefulness of a House Staff Manual could be of value in handing down principles and time-tested usage, provided more emphasis were placed on these rather than on procedures and technical details.

One serious problem relating to patient care, a solution to which is being sought, is the increasing amount of special nursing care required for certain patients. The development of surgery of the thoracic viscera and blood vessels, and the more radical surgery employed in the surgical treatment of cancer, have produced this increased demand for nursing service. A plan for group-nursing these patients has been proposed. In essence, this is an extension of the function of the recovery room with the important difference that the concern during this later post-operative period is primarily Surgery's rather than Anesthesia's. The responsibilities for the care of the patient in this phase of convalescence are those of each individual service. The problem is being studied to reconcile the divergent interests. In view of the critical nurse shortage and the expense of the present arrangement, an answer is urgently needed.

The number of operations performed increased somewhat during 1954 in comparison with the previous year. There was a decrease in admissions to the recovery room which appears to be accounted for by the smaller number of private patients admitted. In neither case, however, do the figures represent a decrease in the activities of the operating room, or of the recovery room, nor in the amount of time required for patient care while there. It is important to understand the reason for this because of the bearing it has upon admitting and scheduling difficulties, increasing congestion in the operating room, and special nursing care in certain groups of patients previously discussed.

In the Table below comparative figures are given showing the numbers of operations performed by the Surgical Service in the major categories for

the past four years, blood bank figures for the same period, and admissions to the recovery room for the past two years. An attempt has been made also to indicate the surgical categories which are expanding, or in which modifications in concepts of disease being treated have resulted in modifications of operative procedures.

	1951	*1952*	*1953*	*1954*	*Increase*
Operations (Surgical Service)	4,105	4,510	5,750	6,069	319
Per cent Ward Operations	53%	49%	48%	49%	1%
Adult Case Classifications*					
Thyroid	364	372	409	444	35
Head and Neck	184	231	350	372	22
Breast	328	374	434	506	72
Thorax	164	177	241	248	7
Gastro-Intestinal	530	469	632	680	48
Appendix	203	139	216	212	—4
Gall Bladder, Pancreas	341	277	424	501	77
Hernia	320	291	434	454	20
Other Celiotomy	309	335	413	372	—41
Rectal and Perineal	307	309	429	450	21
Other Superficial	675	853	893	913	20
Transfusions	13,537	13,474	12,729	11,698	—1,031
Recovery Room			10,753	10,480	—273

* Babies Hospital classification not available.

The numbers of longer surgical procedures tend to increase, whereas the numbers of shorter procedures tend to decrease. Thus, although the overall total may even become smaller in the future (actually, it was greater last year), it fails to reflect the actual amount of work done and time consumed in the operating and recovery rooms. How far this can go without impairing standards of patient care is the vital question, of course. The matter calls for careful consideration and decision before that point is reached.

The Department of Surgical Pathology in the first six months of the year 1954-55, operated with a full complement of professional staff. More calls for immediate frozen section diagnosis in the operating room were made than in 1953. In 1953 there were 1,841 calls for twelve months—in 1954, 1,856 in the first eleven months. The pathologists were also called more often to examine gross specimens in order to determine adequacy of removal. This is a service which may not only reduce the possibility of local recurrence of tumor, but which is educational for the surgeons in the operating room, who have seen only the serosal surface of an organ removed, or the normal tissues surrounding a neoplasm which has been excised with a wide margin. It also enables the pathologist to orient the specimen, and correlate it with the clinical picture. The gross appearance is sometimes more informative than microscopic study, and the close cooperation between the clinicians and the pathologist

achieved in the operating room is highly desirable, particularly in a teaching hospital, with medical students in the operating room and laboratory. As examples of particular demands, recently the Surgical Pathology Laboratory has had calls for examination of nearly every thyroid specimen at least grossly, before the wound is closed, for the triple biopsy breast cases, and for open biopsy of gastric lesions. As to the diagnostic service, the number of surgical accessions from the Hospital has been 6,019 for eleven months of 1954, as opposed to 6,311 in 1953, and from outside sources, which include the Doctors' Private Offices, 2,445 for eleven months of 1954 as opposed to 2,607 in 1953. Three residents are needed for the diagnostic work, and the induction of one of these in October into the armed forces coupled with Dr. Lattes' absence has resulted in greater demands on the other members temporarily on the professional staff, i.e., the surgical and X-ray residents assigned for six months to the Service, graduate students, etc. A great deal of routine work has been done voluntarily over and above the call of duty. The surgical material is also used in the teaching of third year students. The teaching has occupied a great deal of the time of Dr. Nathan Lane who has also been largely responsible for the work of the residents.

In addition to directing the Department of Surgical Pathology during Dr. Lattes' absence, Dr. Frantz has continued to collaborate in clinical and laboratory study of patients with thyroid disease, particularly cancer and thyroiditis, especially those cases suitable for treatment with radioactive iodine. Ancillary studies in the laboratory of the College of Physicians and Surgeons of animals treated with this agent have been carried out with the aid of a research assistant, Dr. Mildred Phillips, supported by a grant from United States Public Health Service. This work is still in progress. Dr. Frantz discussed papers on thyroid disease by Dr. Rulon Rawson and Dr. Oliver Cope at the stated meeting of the New York Academy of Medicine for the scientific session with the Sections on Medicine and Surgery on December 2. She also attended a special meeting of the pathologist members of the American Goiter Society in advance of the annual meeting in Boston in May. In collaboration with Dr. Harold D. Harvey, Dr. Frantz published the third edition of "Introduction to Surgery."

Dr. Scudder reports the initiation of a study of abnormal bleeding in patients subjected to operation. This study is being conducted by the blood bank in collaboration with the surgical laboratories under the direction of Dr. Habif, and with the assistance of Dr. George Kleinfeld, at present a Surgical Intern, and in consultation with Dr. Louise L. Phillips of the Department of Obstetrics and Gynecology. Dr. Robert W. Coon of the Department of Pathology has also participated in this study. The selection of patients requiring fibrinogen and other hemostatic agents has been facilitated and a method worked out for the management of these cases at the time the ab-

normal bleeding tendency manifests itself.

It is desirable from every point of view to develop as close a relationship as possible between the in-patient and the out-patient services. The problem of maintaining constant, adequate clinical care and teaching is not new. Many factors are involved, not the least of which is administrative. The pattern for ward care by subdivision into three services has been working satisfactorily. The danger of such an arrangement lies in too strict compartmentation. This, in an extreme form, could result in essence, in the development of three separate surgical services. Such a possibility is remote but must constantly be kept in mind. Actually, the advantages of subdividing the service far outweigh the disadvantages so that it is logical to think of organization of the clinic along similar lines. A good deal of thought and study have been given this matter and a plan worked out by which it is thought possible to improve the attending staff supervision and house staff coverage of the clinics. This is under consideration at the moment.

Studies of the natural histories of certain diseases are now being reported as the result of the establishment of personal follow-up surgical clinics many years ago. This has been supplemented by laboratory data accumulated over the years. These combined studies have resulted in modification of or changes in concepts of disease entities which in turn have resulted in changes in therapy. This is a continuously evolving process. Periodic clinical evaluation is as important a phase of this process as the experimental phase carried out in the laboratories. Often it supplies initiative for and gives direction to experimental programs. The perservering and far-reaching activities of Miss M. Gertrude Taylor of the surgical follow-up clinic, her staff, and the Social Service Department are indispensable in carrying out this clinical research as well as in providing for the continuation phase of patient care. Urgent help is needed however in studying and utilizing the large amount of information lying fallow in this field of research. A great deal of time and effort are necessary to make it available and its significance appreciated if it is to become of value in the treatment of disease. At no time has this been of more importance in the history of the Hospital than now. Medicine is confronted with queries such as the actual place of heart surgery in the over-all understanding and treatment of heart disease; what, if anything, surgery has further to offer in the attack on cancer; what surgical procedures are of actual value in the prevention and treatment of diseases that commonly afflict the aged and in the care of the chronically ill. The value of accurate, available data on the clinical behavior of important disease processes which a competent follow-up clinic can help provide is so great that it simply cannot be measured.

Physiological and pathological studies during the past year have been divided between the surgical metabolism unit and the surgical laboratories.

Dr. Harold G. Barker reports that the metabolism unit has focused on the early post-operative physiological adjustments which the body must make with respect to such matters as the role of the kidney in the regulation of acid-base balance, the clinical significance and management of electrolyte and fluid shifts, and studies of special groups, in particular jaundiced patients and those having undergone shunt procedures for portal hypertension with ascites. A new project has been started on pleural fluid dynamics in patients who have pleural effusions from a variety of disease states. Support for these studies has been supplied through grants from the United States Public Health Service.

Evaluation of lymphatic function in the arm following radical mastectomy was undertaken by Dr. Habif, Dr. Enzo H. Krahl and Miss Audrey Armstrong. Marked reduction in lymphatic function in the immediate post-operative period was found, with improvement but mild reduction persisting in the later post-operative period. Even in the absence of swelling of the arm, function does not reach normal. With edema there is a definite but variable reduction in lymphatic function compared with the normal and with those without edema. This work was supported by a grant-in-aid from Wyeth, Inc. to Columbia University.

Experimental work bearing directly and indirectly upon the cancer problem has continued in the laboratory for cancer chemotherapy research of the Department of Surgery under Dr. Daniel M. Shapiro, assisted by Dr. L. S. Dietrich. Methods of extending the program of study to human solid tumors are being investigated in anticipation of clinical application of the results obtained from the laboratory when this is deemed feasible and safe. The activities of this laboratory have been concerned with quantitative biochemical differences between tumor and host, a field in which there is an enormous amount of interest at the present time. Combining the clinical knowledge of tumor behavior with the experimental effects of agents influencing it seems to be the most logical approach to ultimate evaluation of results of cancer treatment by this method. It is most important that the highest quality of clinical and laboratory data and experience be available and combined for this type of attack on cancer. It requires a coordinated team of laboratory and clinical workers. This is being organized in such a way that the whole departmental background of experience with the behavior of specific tumors may be utilized. Here is an example of the most fruitful possible combination of clinical and laboratory effort.

Experimental work related to surgery of the heart and blood vessels has been continued in the laboratory of experimental surgery. Dr. Ralph A. Deterling, Jr., and other investigators, including residents, have carried out a number of investigations including those on hypothermia, blood vessel preservation, replacement by tissue or plastic grafts of removed segments

of vessels, and portal circulation time using radioactive sodium. The latter work was presented at the Surgical Forum of the American College of Surgeons in November. The laboratory has also produced a number of teaching films. It has recently acquired additional equipment with which to further this work. Dr. Ferdinand F. McAllister and Dr. Hugh F. Fitzpatrick have carried out and published quite extensive hemodynamic studies made during mitral valve surgery. Dr. Fitzpatrick is a candidate for the degree of Doctor of Medical Science on the basis of his studies of the circulation both experimental and clinical. Many of these studies are of fundamental value particularly in surgery of the heart and great vessels. Of much practical importance were his observations that led to recognition of the fact that intravenous replacement of blood is more effective than intra-arterial replacement in restoring cardiac output and in acute hypovalenic shock.

Continuing the work previously reported, Dr. Arthur B. Voorhees, Jr., and Dr. Arthur H. Blakemore have experimented with braided Vinyon. With Dr. Alfred Jaretzki, III, they have also studied the toxicity of antibiotic agents on the aorta.

Dr. Samuel R. Powers was granted the degree of Doctor of Medical Science for his work on the fundamental properties of blood flow. Dr. Powers was appointed Assistant Professor of Surgery of the Albany Medical School, in charge of the experimental surgical laboratory of the School, and Assistant Attending Surgeon at the Albany Hospital, and Attending Surgeon at the Albany Veterans Hospital on completion of his surgical residency on June 30, 1954.

The degree of Doctor of Medical Science was conferred also on Dr. David Ju of the the Division of Plastic Surgery. Using radio-isotopes, he investigated lymphatic flow in the extremities, experimentally, from which he devised a clinical test of lymphatic competency using radio-iodinized albumen rate of absorption, since albumen is absorbed almost completely through the lymphatics.

Dr. Hubert L. Rosomoff, Assistant Resident in Neurological Surgery, in collaboration with Dr. Duncan A. Holaday, Assistant Attending Anesthesiologist, studied the effect of hypothermia on the cerebral circulation and showed that it is not adversely affected so long as adequate respiratory and cardiac functions are maintained.

Dr. Robert W. Holliday began work on the application of ultra-sonic methods of measurements of blood viscosity in liquid and clotting states. This work, which is in progress, is potentially of much practical importance.

Dr. Julius H. Jacobson, working with Dr. McAllister, has been able to produce intermittent claudication experimentally. Thus the pathologic-physiology of this phenomenon may be studied, as well as the effects of remedial drugs, other agents and operative procedures designed to promote collateral

circulation.

Dr. Prudden has set up a perfusion laboratory where investigations into factors influencing the rate of synthesis of protein by isolated and perfused livers are being carried out. Striking differences in the dynamics of protein synthesis in the presence of insulin and growth hormone have already been shown. It is planned to evaluate the effects of these and other endocrines as well as the effects of growth hormone in humans by means of the protein incorporation rates of S35-labelled methionine at various intervals. This work is being financed by a United States Public Health Service grant.

The work of the electrogastrogram laboratory, under Dr. Edmund N. Goodman, has proceeded along two different lines, one clinical and one research: Dr. Henry Colcher of the Department of Medicine has joined the team and the investigative work is proceeding to study, 1.) the pharmacological effects on the electrogastrogram and 2.) emotional effects on the electrogastrogram. Dr. Melvin Schwartz, a biostatistician, has also joined the laboratory in order to evaluate statistically the clinical results. On November 12, 1954, a symposium was held on the electrogastrogram in collaboration with the College of Physicians and Surgeons. It was well attended by physiologists, biophysicists and doctors from the United States and Canada.

The surgical bacteriology laboratory under the direction of Dr. Meleney has been carrying on a clinical and laboratory research program for the purpose of determining the most effective preparation of the gastro-intestinal tract for surgery by the use of antibiotics. The indications for and rationale of combinations of antibiotics in the treatment of surgical infections has been a continuing study of the laboratory. It was the subject of presentation by Dr. Meleney at the Graduate Fortnight of the New York Academy of Medicine, October 21, 1954, and again with Miss Balbina Johnson before the Annual Symposium on Antibiotics in Washington, D. C., October 25th to 29th.

Clinical studies of the gastro-intestinal tract include the annual report on appendicitis which has been prepared and will shortly be presented to the surgical group by Dr. Schullinger.

Dr. Robert S. Grinnell has continued his studies on large bowel anatomy and neoplasms in cooperation with the Department of Surgical Pathology. Work is in progress with Dr. Lane at the present time on the occurrence and characteristics of adenomatous polyps of the colon and rectum for the purpose of trying to determine their relationship to cancer and a surer basis for surgical management. Dr. Grinnell has also analyzed a group of squamous cell carcinomas of the anus, and published a paper recently on the distal intramural spread of carcinoma of the rectum and rectosigmoid. Dr. Grinnell's work has dealt with fundamental anatomical and biological charac-

:eristics of cancer of the large bowel, and is exerting considerable influence on the thought and practice of surgery on these structures.

The clinical study of operated cases of peptic ulcer and gastric carcinoma has been maintained by Dr. Harvey. This is largely a follow-up study of results of treatment and details of technique related closely to patient care. Dr. Porter participated in panel discussions on the surgical management of gastro-duodenal, pancreatic and biliary tract disorders at Memorial Hospital and at the American College of Surgeons meeting in November. The panel held by the College was presided over by Dr. Parsons.

Dr. Thomas V. Santulli has continued to be an energetic and effective Chief of Surgical Clinics. His experience with intestinal obstruction in the newborn infant was summarized in an article which appeared in the Journal of Pediatrics recently.

The effects of cortisone and ACTH in certain blood dyscrasias treated by splenectomy was studied by Dr. Robert H. E. Elliott, Jr., in collaboration with Dr. George A. Hyman of the Department of Medicine. The results of the study were presented before the Society of University Surgeons in February and have been published.

Clinical studies of the thyroid gland were continued by Dr. Sloan during the past year. A paper on this work was presented before the American Goiter Association in May, and subsequently published. It reflects much of the experience of the group of thyroid surgeons and pathologists at Presbyterian Hospital which has formed the background and determined the present concepts of thyroid surgery here.

It is evident that the Surgical Service has enjoyed an unusually productive year in terms of patients cared for, investigative activity, and broad professional contacts at home and abroad. With increasing activity problems of organization continue to arise, the most pressing of which have been indicated. In seeking solutions to these problems, we know that we can rely in the future, as we have in the past, on the unfailing cooperation of the Nursing Service and of the other ancillary Hospital services, and the continued assistance of the Hospital administration.

Urology

GEORGE F. CAHILL, M.D., *Director*

Dr. Alex Finkle, Assistant Urologist, has resigned to become Assistant Professor of Urology in the University of California. There have been no other changes in the staff during the year.

A marked increase in the diagnostic procedures, especially those in the roentgenographic field, by the Urological as well as other Services, has compelled the Service to use its facilities to the utmost. Among these have been the use of aortograms and retroperitoneal gas insufflation studies.

During the year, in association with the Department of Microbiology, Professor Harry Seneca has continued his studies on the synergistic effect of antibiotics on micro-organisms. He also experimented in the mutation of Endameba, and has shown the difference between sensitive strains and resistant strains. He has been able to promote cultures of Entameba with carbomycin, the first incidence of an antibiotic having a growth promoting effect upon micro-organisms. He concluded after studies upon glucocorticoids that they have no bacteriostatic effect upon bacteria, and that the spread of infection was due to the suppression of resistance. He showed that anisomycin, a new antibiotic, was not effective in experimental trypanosome or leishmania infections. He found that oxytetracycline and polymyxin stimulate spermatogenesis. He is now studying the effects of antibiotics on ovarian function and maturation of the Graafian follicle. He has been studying the mechanism of susceptibility to infection by cortisone and hydrocortisone. With Dr. Abner Wolf, Professor of Neuropathology, he has isolated from monkeys from India, an organism similar to Trypanosoma Cruzi.

The Urological Service participates in some of the activities of the research group at the Francis Delafield Hospital, under Dr. Perry B. Hudson. This group, studying genito-urinary cancer, conducts its activities in the area of enzymology, hormonal and steroid chemistry, nucleic acid chemistry, surgical pathology and clinical studies including surgical techniques. The Urological Service has contributed material for their study of prostatic acid phosphatase enzymes. These have been shown to be specific proteus, probably foreign to human serum except in those instances where carcinoma has metastasized. Laboratory studies have apparently successfully isolated the hormone and studies have been made concerning its behavior in response to heat.

Steroid chemistry problems have included those related to extraction of steroids from human blood with a simplified technique of cannulating the

central adrenal vein.

Laboratory studies have been made of nucleic acid metabolism in excised human kidney and testis using radioactive tracer compounds; also studies using nisentil hydrochloride on analgesic narcotic preparations in minor urological surgical procedures.

Dr. Hudson has prepared a treatise on benign and malignant tumors of the prostate for the Veterans Administration. He and his co-workers presented papers before the American Association for Cancer Research and the Federation of American Societies of Biological Chemists. He also presented papers or lectured before many of the sectional and state cancer societies, and attended and reported at the 6th International Cancer Congress in Sao Paulo, Brazil.

Dr. John K. Lattimer continued his studies in renal and genital tuberculosis. He addressed the National Tuberculosis Association, the American Urological Association, the Iowa State Trudeau Society, the Saranac Lake School for Tuberculosis, the New York Academy of Medicine, and presented an exhibit at the annual meeting of the American Medical Association. He also spoke at the meeting of the American Association of Genito-Urinary Surgeons. He continued his teaching program in the School of Nursing.

During the year, Dr. Lattimer had publications on renal tuberculosis, management of tuberculosis, the transmission of genital tuberculosis from husband to wife, dependability of urine cultures on tuberculosis during chemotherapy, cryptorchidism, the relative incidence of pediatric urological conditions, and radical prostatectomy for cancer of the prostate.

Dr. Meyer M. Melicow continued his investigations upon tumors of the testes with a report upon their classification, types and behaviors before the American Urological Society. He also carried out an extensive clinico-pathological study of bladder tumors which he reported before the North Eastern Section of the American Medical Association at Quebec. Pathological studies of the adrenal gland were continued with lectures delivered on the same. He continued throughout the year to hold seminars before the resident staff in urinary pathology. He was appointed Civilian Consultant in Uropathology to St. Albans U. S. Naval Hospital.

Dr. Ralph J. Veenema presented a paper at the New Jersey State Medical Society upon prostatic carcinoma and biopsy, and to the Surgical Section of the New Jersey Medical Society upon the evaluation of lumbar aortography in urology.

During the year, Dr. Ralph C. Yeaw was elected Vice-President of the New York Section of the American Urological Association. Dr. Charles T. Hazzard served during the year as President of the New York Section of the American Urological Association. Dr. John N. Robinson was elected President of the Harvard Medical Society of New York City, a member of the

Executive Committee of the New York County Medical Society, and the Membership Committee of the New York Academy of Medicine. During the year, he continued to work with the research group in the problems of mal descent of the human testis and that of male infertility. Dr. George W. Fish was elected to the Editorial Board of the Journal of Urology, a Trustee of the American Urological Society Research Foundation, and was reappointed Senior Civil Consultant in Urology in the United States Army. During the year, with Dr. Finkle and Dr. Clement A. Furey, Jr., he published a study on aortographs in renal trauma.

Dr. George F. Cahill has completed his ninth year of service as a member and Trustee of the American Board of Urology, and after service as President of the Board, he has retired as member emeritus. He also completed his five year term as Trustee of the American Urological Foundation, Inc. During the year he participated in a number of medical society meetings, presenting papers upon various aspects of adrenal disorders. He also gave the Lower Lecture before the Cleveland Academy of Medicine. During the year he has continued his work upon various problems of adrenal disorders with Drs. Joseph W. Jailer and Marcel Goldenberg of the Medical Service.

Since the establishment of the Squier Urological Clinic in 1928, there have been 37,625 admissions to the Service, of which 26,913 were new cases. During the year 1954, there were 1,925 admissions to the Service, of which 662 were admitted to the wards, 609 to semi-private, 263 to Harkness, and 391 to Babies. There were 852 consultations for other services. Operations totaled 833; in-patient cystoscopies, 1,933. Within the Service there were 37 deaths, a percentage of 1.9 per cent of admissions; there were 24 deaths following operations, a percentage of 2.9 per cent. A total of 6,902 X-ray examinations were made, and 14,200 separate laboratory tests were done.

The Service wishes to express its thanks and gratitude to the number of friends who so kindly contributed to its maintenance and to its studies. We wish to thank among these, the trustees of The Presbyterian Hospital and its administrators. We especially wish to thank the Charles Pfizer Company for its generous donations and Mrs. Mary Lasker for her support. We also wish to thank Mr. Richard Blow and Mr. John L. Given for their continued contributions; and Miss Kate Wollman for her most generous support to our pathological division. To the members of the staff, both professional and non-professional, the Director wishes to express his thanks for their faithful and cheerful service during this last year of 1954.

Reports of Voluntary Organizations

The Alumnae Association School of Nursing

MRS. DAVID V. HABIF, *President*

The activities of the Alumnae Association have been primarily concerned with the Columbia Bicentennial Celebration. Miss Eleanor Lee was chosen General Chairman of the Department of Nursing Fund. Miss Marjorie Peto is the Alumnae Chairman and Mrs. Allen Look, Honorary Chairman. The Executive Committee members include Miss Josephine Brown, Mrs. Helen Delabarre and Miss Peto. Miss Brown, National Organization Chairman, accomplished the tremendous task of organizing 121 committees to contact our alumnae all over the world. Half of the funds allocated to the Department of Nursing will be used for scholarships for deserving nursing students and the other half for space in the new Library-Auditorium. Our Connecticut alumnae suggested we sponsor a room in the Library-Auditorium to be known as the Helen Young Seminar Room for Nursing. More than 70 per cent of the necessary $10,000 has been subscribed. As of December 7, 1954, 40 per cent of the entire alumnae body has contributed to the Department of Nursing Fund.

The Alumnae Biographical Register was published and mailed to 2,277 alumnae residing in all forty-eight states, Canada, Mexico, Canal Zone, Africa, Belgium, Bermuda, Central and South America, Cuba, Denmark, England, France, Germany, Guam, Greece, Haiti, Hawaii, India, Indo-China, Iran, Japan, Korea, Lebanon, Norway, Puerto Rico, Saudi Arabia, Scotland, Switzerland and Union of Burma. Miss Winifred Kaltenbach and Miss Cecile Covell and their committee, responsible for publishing the register, deserve the special vote of thanks tendered them.

On May 12 and 13, the Department of Nursing of the Faculty of Medicine and the Division of Nursing Education, Teachers College, joined in a conference at Columbia University to mark the 200th anniversary of Columbia University, and the 100th anniversary of Florence Nightingale's work in the Crimea. Five of our alumnae spoke: Miss Margaret Eliot, Miss Peto, Miss Marion D. Cleveland, Miss Dorothy Reilly and Miss Margaret Arnstein.

Miss Louisa Kent attended the 39th Convention of the American Nurses Association in Chicago on April 26-30 as delegate from the Alumnae Association. Miss Mary Windrow was delegate for both the Presbyterian Hospital and District 13 of the New York State Nurses Association.

On May 27 our annual dinner dance for the graduating class was held at the Hotel Pierre. Miss Eliot was chairman and Mr. W. E. S. Griswold, Jr., master of ceremonies. Short speeches and best wishes came from Mr. Benjamin Strong, Mr. Charles P. Cooper, Miss Eliot and Miss Eleanor Lee.

Three meetings of the Alumnae Association were held in Maxwell Hall. On February 18, Miss Yvonne Hentsch, Director, Nursing Bureau, League of Red Cross Societies, Geneva, Switzerland, spoke briefly on her work with the Red Cross. Senior students gave a piano recital and selected kodachrome slides of Europe and South America were shown by alumnae members. June 4 was Alumnae Day and nine classes were represented at reunion luncheons. During the Annual Meeting, the Class of 1954 was formally presented for membership, and the following officers elected for the coming year: President, Mrs. David V. Habif; Vice-President, Mrs. William Cavanagh; Corresponding Secretary, Miss Susan B. Moore; Recording Secretary, Miss Ruth A. Lynch; Treasurer, Miss Helen Young; Assistant Treasurer, Miss Margaret Wells.

The Alumnae Association was pleased to vote into its membership, Mrs. Henry P. Davison and Mr. Cooper as Honorary Members.

On November 18 Viscountess Buckmaster, visiting from England, gave a most enjoyable and informative story of Britain's Heritage. Miss Hentsch, the Anna C. Maxwell Fellow for 1954, thanked the Alumnae Association for her opportunity to study at Teachers College.

Twenty-five scholarships and one fellowship amounting to $4,566.66 were awarded in 1954. The Distributing Fund received contributions of $7,517.54 of which $1,700 were special gifts by the alumnae to Capital Funds.

During the year 1954 the Alumnae Association has lost through death sixteen members, two honorary members and staunch friends, Mr. Cornelius R. Agnew and Mrs. William F. Leggett.

We wish to thank the Board of Trustees and the Hospital for their continued support of our Alumnae Association.

Board of Women Managers of the Babies Hospital

MRS. GROVER O'NEILL, *President*

The consolidation of the Board of Women Managers of the Babies Hospital and the Cribside Social Service Committee was completed in May. The first joint meeting was held in November. We are happy to welcome the Cribside members to the Board, and feel that the merger will bring added interest and opportunities to all.

The Recreational Therapy Department continues to be a source of great satisfaction under the able and enthusiastic direction of Miss Paula deVautibault.

The Board continues its support of the Pediatric Psychiatric Clinic, the Emergency Nursing Fund and the Christmas Doll Fund.

Miss Dorothy Mills was willing to serve again as group leader for The United Hospital Fund, with Mrs. Joseph V. McMullan, Mrs. James McCosh Magie, Miss Hope Kingsley and Mrs. Douglas Williams as team captains. Miss Kingsley and Mrs. Rodman B. Montgomery helped with Box Week and many other members of the Board gave generously of their time. My warmest thanks go to all members who took part in the United Hospital campaign.

We are most grateful for the generous gifts which the Hospital has received during the year. Members of our Board have given financial support to the General Fund of the Hospital and to the Emergency Nursing Fund; and have donated equipment to the Recreational Therapy Department.

The children enjoyed a most wonderful Christmas, made possible through the generosity of our friends. Gifts were received from Harper's Bazaar, Miss Hewitt's Classes, New York Telephone Company, Mr. Edgar A. Newberry, School of Dental and Oral Surgery of Columbia University, Manhattan West Side Kiwanis Club, Miss Marion Marsh and International Business Machines.

The Board regrets the resignation of Mrs. Alexander L. Keyes as Corresponding Secretary. She has been a very diligent and efficient officer. We are very grateful to her for serving.

The past five years have been intensely interesting and happy ones for me as President of the Board. I consider it a great honor to have been chosen and wish to express my appreciation for the confidence and cooperation I have received. I cannot speak too highly of the faithful service and devotion

to the highest ideals of their professions, expressed in so many ways throughout these years, by Dr. Rustin McIntosh, Miss Marjorie Peto and Miss Elizabeth Callahan.

CRIBSIDE SOCIAL SERVICE COMMITTEE

Mrs. Leo C. Fennelly, *Chairman*

For 67 years the Cribside Committee and the Women's Board have been working for Babies Hospital, each in its own sphere of interest. Since November, the two are functioning as one, with the hope that this pooling of interests will benefit both.

The Cribside Committee has raised about $8,500 for The United Hospital Fund. The group leaders and team captains are noted in Mrs. O'Neill's report.

Another change during the year was the move of the thrift shop from the Nearly New Shop, to the Bargain Box at 1175 Third Avenue. Thanks to the generosity of our regular donors, many new contributors, and to the untiring efforts of Mrs. Herman Hoops, Miss Hope Kingsley, Mrs. James McCosh Magie and Miss Dorothy Mills, this has been a great success. Receipts have totaled $2,441.97.

The Cribside Committee was very much saddened by the death of Mrs. H. Pushae Williams, who had been a member for 27 years. Besides being our representative on the Welfare Council, Mrs. Williams was an active worker for the Lenten Sewing Class. She helped to bring its receipts up to $701.29 for 1954.

During the year 2,621 families, whose children were pediatric patients of the Hospital or Clinic, received help from our Social Service Department. There were 274 children placed for convalescent and camp care. Cribside financed the cost of this, which amounted to $1,685.46. Parents of these children reimbursed the Committee to the extent of $901.50. Our total contribution towards the expenses of the Social Service Department was $18,746.18.

We suffered a great loss through the untimely death of Mr. Parke. He was always a great friend of the Committee, helpful, understanding and sympathetic, and we will miss him very much. We are, however, most fortunate to have Mr. Binkert carry on, and know that he too, is our friend.

The Mary Harkness Convalescent Home Auxiliary

MRS. BENJAMIN STRONG, *Chairman*

The Mary Harkness Convalescent Home Auxiliary is pleased to report that the Home, including the Strong Memorial Wing, is running smoothly under the capable direction of Miss Miriam Hubbard and her assistant, Miss Ann S. Parsons.

Five new members have been appointed to the Auxiliary: Mrs. Robert Archer, Mrs. John T. Beaty, Mrs. William L. Crow, Mrs. Dudley B. Donald and Mrs. Robert C. Wheeler. Two members, we regret, resigned: Mrs. Nelson W. Millard and Mrs. James S. Alexander. There are now ten members on the Auxiliary.

The Auxiliary is very sorry that the adult section and the children's wing are not always filled to capacity, and wishes that somehow the doctors, nurses and patients could know the ideal facilities that the Home offers. The adult portion accommodates thirty-five patients, and the children's wing twenty-two. There are both physical and occupational therapy rooms with modern equipment. An occupational therapist serves there full time. There is also a school room and a teacher every morning from Monday to Friday supplied by the State. There are several attending doctors, two from the Greenwich Hospital. The location of the Home is ideal, just off the Merritt Parkway on King Street, about forty-five minutes drive from the Hospital. The setting is beautiful with spacious grounds, and the Home itself is more like a private house than an institution. In order that more people connected with the Hospital can see it, Miss Hubbard has asked different committees (doctors, nurses, staff and auxiliaries) to hold their meetings there in the Spring, Summer and Fall. Luncheon, and sometimes supper, has been served, and many have used the grounds for picnics.

The Auxiliary, through the House Committee of the Medical Center, has been able to augment some of the needs of the Home, and to bring to the Hospital's attention larger and more important problems, which are now being studied.

The plant, facilities and grounds are, in general, in excellent condition.

There have been picnics or parties on nearly all festive days for the patients—the nurses and the staff doing their utmost to make the Home comfortable and happy.

The Committee is grateful to Mrs. Edward Lethen for the music she provides each Christmas for the Christmas Party. Also, the Committee again this year thanks the ladies of the United States Trust Company who have dressed so many dolls and given them to the children. Through Mrs. William Bristol and the Bristol-Myers Company, the Committee is again grateful this year for the boxes of sample toilet articles which are distributed to the patients.

The Auxiliary earnestly hopes more and more people will come to see the Home, and to appreciate the exceptional opportunity offered to so many convalescing patients.

Neurological Institute Auxiliary

MRS. BYRON STOOKEY, *Chairman*

The Neurological Institute Auxiliary is pleased to report a year of greatly increased service in the Social Service Department of the Neurological Institute, the support of which is the committee's special charge. During that time the staff served 2,115 persons in a total of 17,236 interviews as compared with 1,236 persons taken care of in 13,989 interviews during the previous year. A large part of this increase is due to the gratifying fact that the medical staff is turning increasingly to the Social Service Department for help in finding appropriate community resources for private patients.

To have carried successfully so heavy a case load reflects great credit on the loyalty and devotion, as well as the ability, of the staff of the Social Service Department, especially since the staff is handicapped by being short three members, or 25 per cent of its personnel. The prevalent shortage of trained social workers is a serious problem to the whole field and greatly limits the service which could be rendered. The committee regrets to report the loss of Mrs. Boggs Mann, the supervisor of the department for eight years, and Miss Geraldine Zousmer, to other important community positions but we take pride in feeling that the high standards of the department's work will always be carried by them in their further fields. It is a reassurance to the members of the Auxiliary that Mrs. Dorothy Ettlinger, who has been a member of the staff for several years, has accepted the position of supervisor in the department, and we are confident that she will fulfill this added responsibility with credit. We are glad to welcome to the staff Mrs. Priscilla Smith, a graduate of the New York School of Social Work, and are happy to report that during the year the department has had the responsibility and the stimulus of two students from the New York School of Social Work and the student who holds the newly-established Presbyterian Hospital Social Service Scholarship.

Under the direction of Miss Hester Holland, a valued member of the staff, and with the assistance of funds generously donated by interested friends, among them the Society for the Relief of Women and Children, and the money received from the Havens Fund, for which Mrs. Charles E. Adams serves as almoner, seventeen children between the ages of six and fourteen were sent to summer camps. Of these, sixteen were seizure patients who were given the benefit of considerably longer periods at camp than in previous years. This greater length of stay accounts for the fact that fewer children could have the advantage of the camp experience, but in view of their con-

stant efforts to establish in the minds of the community the value of this experience to seizure patients, the staff felt the benefits to be gained by the children from a longer stay would add proof to their conviction.

The Thrift Shop Committee, under Mrs. Royall G. Cannaday's devoted guidance, continues to contribute a large share of the expenses of the Social Service Department. Thanks to the unremitting efforts of the members of the committee, the Neurological Institute has this year realized $9,427 from its participation in Everybody's Thrift Shop as against $6,137 last year.

The patients in the Neurological Institute continue to derive diversion and interest from the books, magazines, pictures and facilities for their use, supplied by the Milbank Library. For this they are indebted to Mrs. Bruce Brodie who serves on the Milbank Library Committee as the representative of the Neurological Institute.

Mrs. Willis D. Wood, the ever-alert liaison between the Neurological Institute and the House Committee of the Medical Center, has, as always, been vigilant to perceive and determined to meet the needs of our Hospital.

The committee reports with pleasure that Mrs. William Shippen Davis has assumed the leadership of our two teams in the United Hospital Fund campaign. Thanks to her efforts and those of the workers on these teams, we have to date brought in 300 gifts totalling $19,212. This represents 96 per cent of our quota. Again Mrs. Stuart D. Preston, as Chairman of Box Week has not only inspired many of the members of our teams to work on this phase of the campaign, but has herself given devoted service to it.

Our group was again happy to have a part in the tea held at Maxwell Hall for members of the staffs of welfare agencies in the community which cooperate with the Social Service Departments of the Medical Center. In view of the shortage of suitable community resources for our patients anything that can be done to enhance the potential in this vital field is of great value.

Mrs. Edith Achilles, the secretary of our Auxiliary, also represents this committee on the Welfare and Health Council to which she takes her clear point of view and from which she brings interest to our group.

We report with great regret the retirement of Miss Mercedes Geyer, who for several years, pending the appointment of a new Director of Social Service in the Neurological Institute, has with great tact and wisdom temporarily carried the responsibilities of that position. And we are grateful that Miss Elizabeth Prichard, her successor at Presbyterian, is continuing this work.

The Neurological Auxiliary records their sense of personal and group loss in the death of Mr. John S. Parke. His interest and enthusiasm and his ready response to our needs and problems were an unfailing source of strength and inspiration. We welcome Mr. Alvin J. Binkert in his new position as Vice-President and General Manager and count on him as a friend and adviser of this committee to whom we have long turned for help and in whom

we have always found constructive support.

Our Auxiliary takes great pleasure in welcoming as new members of the committee Mrs. Rollo J. Masselink, Mrs. J. Lawrence Pool, Mrs. Henry A. Riley, Mrs. John E. Scarff and Mrs. Sidney J. Weinberg. Mrs. Riley has kindly agreed to represent our group on the newly-formed Committee on Families and Adults of the Welfare and Health Council, and Mrs. Weinberg has, with great thoughtfulness, taken over the representation of the Neurological Auxiliary at the monthly luncheons for the auxiliaries at the Medical Center. New and old members of the committee alike join in warm appreciation to all the members of the staff of the Social Service Department of the Neurological Institute whose work it is their pleasure to uphold and whose cooperation it is their privilege to enjoy.

Women's Auxiliary of the New York Orthopaedic Dispensary and Hospital

Mrs. S. Hazard Gillespie, Jr., *Chairman*

The main function and interest of our Auxiliary has continued to be with the children's and babies' ward of the Orthopaedic Hospital. The idea of a full-time recreational worker has proved most successful. Mrs. Helen Smith Vechter, our first director, instituted and developed the program. She had a most difficult undertaking in a completely new field, and it is greatly to her credit that the Hospital, nurses and patients are all convinced that this is an essential service which must be continued. Both doctors and nurses consider this recreational program valuable to the student nurses. It gives them an opportunity to observe the children as children, instead of just patients, and to study their play behavior and different reactions. In August, when Mrs. Vechter resigned, we were extremely fortunate in being able to procure the services of Miss Joan Caplain, who had worked under Mrs. Vechter as a volunteer and who has the same imaginative interest in the children and her work.

We have had several children's parties at the various holidays, Easter, Hallowe'en and Christmas. Clarabelle, the clown, Nat King Cole, and other stars of screen and television have been most generous, giving of their time and talent. The showing of weekly movies to both children and adults continues, and while we have been fortunate in receiving toys, records and books from various friends of the Hospital for our play porch, we can always use more.

It may seem to people around the Hospital that Miss Helen Irwin, our Director of Social Service, has been able to cover double the ground she did last year, but the fact is that half the time you are seeing her identical twin, Margaret, who joined our staff this year. Between them they make a fine team. Miss Helen Irwin generally reports to us at our meetings and thus we are able to follow what happens to many of our patients after they leave the Hospital. She keeps track of them through the period of recuperation and rehabilitation until they are completely discharged. Miss Irwin again bought Christmas presents for the out-patient department and our committee filled Christmas stockings for those children left in the Hospital over

the holidays.

Our Auxiliary presented a gift of a dozen silver coffee spoons to Miss Mercedes Geyer on her retirement as Director of the Social Service of the Medical Center. We look forward to working under the direction of Miss Prichard, the new Director.

During the year we have welcomed Mrs. E. Haring Chandor and Mrs. John Drexel as new members.

We had several very interesting meetings during the year. In one we visited, with Dr. Alan DeForest Smith, the various laboratories in the Hospital. The Bone Bank we found particularly interesting. On another occasion we had a very enjoyable excursion to the Mary Harkness Home in Port Chester. Miss Hubbard, the Director, was most hospitable and showed us over the beautiful grounds and house and gave us an excellent lunch. We were especially interested since many of our patients go there for convalescence and all have reported a very happy time.

The United Hospital Fund teams have done an outstanding job under Mrs. Edward Gerry and Mrs. William Kirkland. We received from The United Hospital Fund and Greater New York Fund a total of $11,249.91 in 1954.

Miss Delphine Wilde has added another successful year to her record in charge of nursing in the New York Orthopaedic Hospital, ably assisted by Miss Hester Ann Brown, Miss Frances Holub and countless others. We hope we have been as helpful and cooperative to them as they unfailingly are to us, and that together we may be even more useful in serving the Hospital in 1955.

Women's Auxiliary of the Presbyterian Hospital

Mrs. George A. Perera, *Chairman*

With a new Chairman of the Auxiliary and several new Chairmen of sub-committees, at least part of 1954 was devoted to forming a new working team for our Auxiliary endeavours.

The death of John S. Parke in August, was a great loss to all of us, for his enthusiasm and cooperation had made it possible to carry out many of our projects and interests. We deeply regret his passing. We extend our good wishes to Alvin J. Binkert, knowing that he already has great knowledge of the Hospital and of our Auxiliary function in rendering additional services to the patients and staff.

Mrs. Hamilton Southworth is the present Chairman of the Nominating Committee, and it is gratifying to welcome as new members Mrs. Sidney Fibel, Mrs. Walton P. Kingsley, Mrs. William Kirk, Mrs. W. Roy Manny, Mrs. Howard C. Moloy, Mrs. Herbert H. Schwamb and Mrs. William B. Sherman. We deeply regret the death of Mrs. Prescott Slade, and the resignations of Mrs. Hugh Auchincloss, Jr., and Miss Alice T. Parkin.

The necessary income for our projects in the Hospital comes from our Thrift Shop and our work in The United Hospital Fund Campaign. Mrs. Stresenreuter Butler and Mrs. Robert S. Grinnell, with the loyal cooperation of their Thrift Shop workers, have raised $3,389 at Stuyvesant Square Thrift Shop. In The United Hospital Fund Campaign, Mrs. C. Redington Barrett, Mrs. Ralph H. Boots, Mrs. James M. Breed and Mrs. Edgar Stillman were aided by 34 workers, and obtained 700 gifts totaling $21,772.

The Milbank Library has continued to serve the needs and interests of patients and personnel with a total distribution of more than 37,000 books and pictures. Three book sales have netted over $200, used for Library expenses, and the Auxiliary allocated extra funds for the purchase of current books. It is gratifying that Mrs. Yolanda B. McKnight, Librarian, Mrs. I. Louis Kramer and the volunteers who man the book carts can so adequately serve the literary needs of the Hospital family. Great credit is also due Mrs. Sidney Fibel and her assistants, who continue to brighten the wards with the bedside art project.

The House Staff Loan Fund has been used only twice, and it is felt that the stipulations for its use need to be revaluated.

In the Occupational Therapy Department, Miss Eunice Ford continues to supervise a group of selected volunteers who work with patients on a recreational arts and crafts program. Mrs. S. Hazard Gillespie, Jr., new Chairman of this committee, cooperates with Miss Ford and Mrs. Helen White, Director.

Mrs. Philip D. Wiedel and her committee attractively decorated the "Rendezvous Room," a lounge for women personnel on the 20th floor. This room was opened in March, and has proved a pleasant, quiet spot for "off duty" hours. Two locker rooms were also redecorated.

The Volunteer Department, under the able leadership of Miss Laura M. Vossler, has continued to grow both in size and service with an increase of 24 per cent in hours over 1953. An average of 295 volunteers per month gave a total of 84,474 hours for the year. It is interesting to note that our evening program has expanded tremendously since we have put a paid assistant in the office during the evening hours. Through the cooperation of Miss Margaret Eliot and the Nursing Department, two "ward aide" training programs were given. Miss Marjorie Peto and the residents in Babies Hospital gave several lectures to the evening volunteers on the "Tender Loving Care" program. The volunteers who work on filing and bibliography in the Department of Plastic Surgery found their interest broadened and sustained by a talk from Dr. Joseph A. Tamerin.

The Auxiliary was happy to send Miss Vossler to the American Hospital Association Convention in Chicago, knowing that she would bring back many valuable ideas from other volunteer directors and the contact with other hospital auxiliaries.

As in other years, our volunteers were honored by a tea at Maxwell Hall. One hundred and thirty-eight volunteers received the Presbyterian Hospital pin for 100 hours of service. Two volunteers, one of them Mrs. Louis Connick, Chairman of our Volunteer Committee, received recognition for 12 years continuous service to the Hospital.

Under the leadership of Mrs. Jose M. Ferrer, Jr., the Social Service Committee helped with a Tea to honor Miss Mercedes Geyer, who retired as Director of this Department in June. The Committee has continued to meet regularly with the new Director, Miss Elizabeth Prichard, and the Auxiliary has derived better knowledge of the Social Service Department from having her speak at one of its regular meetings this fall. We have been interested in the program of second and third year scholarships at the New York School of Social Work, and have been gratified that we were able to make a small contribution to one of the holders of these scholarships. Mrs. Yale Kneeland and Mrs. Samuel W. Lambert, Jr., have continued as our almoners for the Havens Relief Fund, disbursing $1,200.

To meet a request from the Administration for additional help to the

Library and Volunteer Department, the Auxiliary voted an additional $3,000 to its other contributions and will make every effort to make this a continuing obligation.

We are grateful to all members of the Board of Trustees, the administration and the staff, who make our role in the Hospital so interesting and so rewarding.

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*Williamson, Miss Nancy B.
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Roderigo L. Gabuya, M.D.
R. G. Melbourne Harvey, M.D.

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George Minervini, D.D.S.
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J. Lowry Miller, M.D.
Dabney Moon-Adams, M.D.

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Leo Schweich, M.D.

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William Curth, M.D.
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Max Liebmann, M.D.
F. Philip Lowenfish, M.D.
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Milton B. Sloane, M.D.

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Arlington Bensel, M.D.
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Joseph S. Shapiro, M.D.
Durward J. Thibodaux, Jr., M.D.

Mycologist
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Wilson A. Powell, M.D.

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Marcus M. Key, M.D.

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Victor M. Torres, M.D.

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Stanley E. Bradley, M.D.
**George W. Draper, M.D.
Charles A. Flood, M.D.
*William A. Gardner, M.D.

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Rene Wegria, M.D.
Sidney C. Werner, M.D.
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Gustav J. Beck, M.D.
Viola W. Bernard, M.D.
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M. Edwina Campbell, M.D.
John W. Cederquist, M.D.
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Frederick H. Shillito, M.D.
Howard B. Shookhoff, M.D.
DeWitt H. Smith, M.D.

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**Inactive

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Alfred Steiner, M.D.
Walter A. Stewart, M.D.
Richard J. Stock, M.D.
K. Jefferson Thomson, M.D.
Sylvia Gould Traube, M.D.
Cornelius J. Tyson, Jr., M.D.
T. Lloyd Tyson, M.D.
Eleanor Z. Wallace, M.D.
Paul Wermer, M.D.
Henry O. Wheeler, M.D.
Carl R. Wise, M.D.
John A. Wood, M.D.

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Max Soley, M.D.

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Leopold Jordani, M.D.
Julia V. Lichtenstein, M.D.

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Roslyn Barbash, M.D.
Achsa M. Bean, M.D.
John T. Beaty, M.D.
Hylan A. Bickerman, M.D.
Adolph H. Boltax
Winifred Bronson, M.D.
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Henry Colcher, M.D.
Neal J. Conan, M.D.
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Peter M. Dean, M.D.
Henry W. Doyle, M.D.
Erna S. Enderle, M.D.
Dorothy Estes, M.D.
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Matthew Rosenchien, Jr., M.D.
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Louis A. Scarrone, M.D.
Sidney Schnittke, M.D.
Murray D. Shepp, M.D.
Cristobal A. Vicens, M.D.
William I. Weiss, M.D.

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John T. Beaty, M.D.

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Karl Meyer, M.D.

Clinical Anthropologist
William H. Sheldon, M.D.

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Michael J. Petti, Pod.D.
John J. Slevin, Pod.D.

Assistant Podiatrists, Vanderbilt Clinic
Donald Altman, Pod.D.
John A. Fajardo, Pod.D.
Bernard Rosenstein, Pod.D.

Resident
John L. Decker, M.D.

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Paul K. Johnson, M.D.
Joanne Lloyd-Jones, M.D.
Roger B. Lochhead, M.D.
Christopher Longcope, M.D.
Edwin P. Maynard, M.D.
Jay I. Meltzer, M.D.
William C. Mohler, M.D.
Elmer Pader, M.D.
Tor Richter, M.D.
John I. Sandson, M.D.
Joseph C. Shipp, M.D.
W. Pierce Smith, M.D.
Donald F. Tapley, M.D.
John S. Thompson, M.D.
Joseph P. White, M.D.
Peter M. Wolkonsky, M.D.

Interns
Thomas B. Bradley, Jr., M.D.
Vincent P. Butler, Jr., M.D.
Arnold L. Flick, M.D.

Interns, Cont.

Eugene L. Gottfried, M.D.
George H. Hogle, M.D.
Frederick A. Klipstein, M.D.
Marvin M. Lipman, M.D.
Daniel Nathans, M.D.
Efren A. Ramirez, M.D.
Thomas Tomasi, M.D.
Earl A. Wheaton, Jr., M.D.
Herbert Wohl, M.D.

Visiting Fellows

David S. Howell, M.D.
Frederic C. McDuffie, M.D.
John R. Preedy, M.D.

MICROBIOLOGY

Attending Microbiologist

Harry M. Rose, M.D.

NEUROLOGICAL SURGERY
(Neurological Institute)

Director of Service

J. Lawrence Pool, M.D.

Attending Neurological Surgeons

John E. Scarff, M.D.
Edward B. Schlesinger, M.D.

Associate Attending Neurological Surgeons

Thomas J. Bridges, Jr., M.D.
Fritz J. Cramer, M.D.
Lester A. Mount, M.D.
Joseph Ransohoff, M.D.

Assistant Attending Neurological Surgeons

James B. Campbell, M.D.

Residents

Neal I. Aronson, M.D.
Arthur F. Battista, M.D.

Assistant Residents

William K. Clark, M. D.
Frank M. Hudson, M.D.
Sherwood A. Jacobson, M.D.
Arthur A. Pava, M.D.
William I. Porter, M.D.
Joseph W. Robertson, M.D.
Hubert L. Rosomoff, M.D.
Edward C. Ryan, M.D.

Clinical Fellows

Rogaciano C. Baisas, M.D.
William H. Cook, M.D.
Carlos Cortelezzi, Jr., M.D.
Georges H. Reinhart, M.D.

**Inactive

Visiting Fellow

William B. Kintzing, M.D.

NEUROLOGY
(Neurological Institute)

Director of Service

H. Houston Merritt, M.D.

Attending Neurologists

Sidney Carter, M.D.
L. Beverly Chaney, M.D.
Angus M. Frantz, M.D.
Clarence C. Hare, M.D.
George H. Hyslop, M.D.
Rollo J. Masselink, M.D.
John McD. McKinney, M.D.
Irving J. Sands, M.D.
Carmine T. Vicale, M.D.

Associate Attending Neurologists

Francis C. Ansanelli, M.D.
William F. Caveness, M.D.
Stanley M. Dillenberg, M.D.
Lewis J. Doshay, M.D.
Arnold Friedman, M.D.
Maurice Frocht, M.D.
Alfred Gallinek, M.D.
Justin L. Greene, M.D.
Ernst Herz, M.D.
Paul F. A. Hoefer, M.D.
Lothar B. Kalinowsky, M.D.
Samuel Reback, M.D.
Albert A. Rosner, M.D.
Leon A. Salmon, M.D.
Daniel Sciarra, M.D.
Maximilian Silbermann, M.D.
Michael H. Teitelbaum, M.D.
Samuel F. Thomas, M.D.
Hyman G. Weitzen, M.D.
Melvin D. Yahr, M.D.

Assistant Attending Neurologists

S. Muriel Baron, M.D.
Paul J. Buckley, M.D.
**Royall G. Cannaday, M.D.
Sidney M. Cohen, M.D.
Kate Constable, M.D.
James F. Culleton, M.D.
Jean P. Davis, M.D.
Zira DeFries, M.D.
Eli S. Goldensohn, M.D.
Sidney S.Goldensohn, M.D.
Werner Hochstetter, M.D.
Frank P. Iorio, M.D.
Stanley Lesse, M.D.
Theodore Lipin, M.D.
Paul Loewy, M.D.
**William Mayer, M.D.
Charles G. McKendree, M.D.
**Henry W. Miller, M.D.

Assistant Attending Neurologists, Cont.

Joseph Moldaver, M.D.
Hyman A. Osserman, M.D.
Bernard Pacella, M.D.
Raul Pietri, M.D.
Harry R. Potter, M.D.
Catherine E. Spears, M.D.
Frederic T. Zimmerman, M.D.

Assistant Neurologists

William Amols, M.D.
Stanley Martin Ball, M.D.
Ludwig V. Chiavacci, M.D.
Robert A. Fishman, M.D.
E. Gardner Jacobs, M.D.
Melvin B. Robbins, M.D.
James McD. Watson, M.D.

Associate Attending Neurologist, Vanderbilt Clinic

**Florizel DeL. Myers, M.D.

Assistant Neurologists, Vanderbilt Clinic

Malcolm B. Carpenter, M.D.
Franklin S. DuBois, M.D.
**William R. Dyer, M.D.
Elizabeth B. Eken, M.D.
Murray Glusman, M.D.
Christina M. Leonard, M.D.
Joseph Livingston, M.D.
Robert B. Miller, M.D.
Geoffrey F. Osler, M.D.
Samuel A. Sandler, M.D.

Resident

Charles M. Poser, M.D.

Assistant Residents

James H. Austin, M.D.
Miriam W. Carmichael, M.D.
Richard M. Esser, M.D.
Boy Frame, M.D.
Gilberto L. Gamez, M.D.
Thomas R. Johns, M.D.
Robert Katzman, M.D.
Eugene W. Loeser, Jr., M.D.
Lowell G. Lubic, M.D.
Joseph Marotta, M.D.
Joseph L. O'Brien, M.D.
Dominick P. Purpura, M.D.
Isabelle Rapin, M.D.
Labe C. Scheinberg, M.D.
Julia Schneider, M.D.
William A. Sibley, M.D.
Hartwell G. Thompson, Jr., M.D.
Faith C. Walsh, M.D.

Visiting Fellows

James H. Brown, M.D.
DeSaussure F. Philpot, Jr., M.D.

*Leave of Absence
**Inactive

OBSTETRICS AND GYNECOLOGY SERVICE
(Sloane Hospital for Women)

Director of Service

Howard C. Taylor, Jr., M.D.

Attending Obstetricians and Gynecologists

E. Everett Bunzel, M.D.
Virgil G. Damon, M.D.
D. Anthony D'Esopo, M.D.
Harbeck Halsted, M.D.

Associate Attending Physician

Alvin J. B. Tillman, M.D.

Associate Attending Obstetricians and Gynecologists

Stanley M. Bysshe, M.D.
Saul B. Gusberg, M.D.
Charles M. Steer, M.D.

Assistant Attending Obstetricians and Gynecologists

William V. Cavanagh, M.D.
Marion D. Laird, M.D.
James R. Montgomery, M.D.
Equinn W. Munnell, M.D.
C. Paul O'Connell, M.D.
Albert A. Plentl, M.D.
John B. Rearden, M.D.
Harold Speert, M.D.

Assistant Obstetricians and Gynecologists

Arnold N. Fenton, M.D.
Dean J. Grandin, M.D.
David B. Moore, M.D.
Landrum B. Shettles, M.D.
Anna L. Southam, M.D.
Harold M. M. Tovell, M.D.
Susan W. Williamson, M.D.

Assistant Attending Gynecologist, Vanderbilt Clinic

Thomas J. Parks, M.D.

Assistant Obstetricians and Gynecologists, Vanderbilt Clinic

Robert Cowan Arrants, M.D.
Joseph Blanchard, M.D.
Howard Lee Walker, M.D.

Residents

*Mary Jane Gray, M.D.
Robert E. Hall, M.D.
Robert L. Hallet, M.D.
Walter P. Kosar, M.D.
George Montgomery, Jr., M.D.

Assistant Residents

Richard S. Banfield, Jr., M.D.
William C. Billings, M.D.
Donald J. Brugger, M.D.
*Stephen G. Burgess, M.D.
William J. Chase, M.D.
Ferdinand H. Flick, M.D.
Emanuel A. Friedman, M.D.
Caroline B. Hunter, M.D.
Herbert M. Magram, M.D.
George P. McGuire, M.D.
Warner Nash, M.D.
Earl D. Neslen, M.D.
Richard L. O'Connell, M.D.
Mario Petrini, M.D.
J. Courtland Robinson, M.D.
William N. Rotton, M.D.
James W. Rutherford, M.D.
Simon A. Sayre, M.D.
W. Duane Todd, M.D.
Angela-Marie Vedovi, M.D.
Frederick C. Vogell, M.D.
Arthur D. Wilson, M.D.
Clement Yahia, M.D.

Clinical Fellow

Bruce S. Waldie, M.D.

OPHTHALMOLOGY
(Institute of Ophthalmology)

Director of Service

John H. Dunnington, M.D.

Attending Ophthalmologist and Pathologist

Algernon B. Reese, M.D.

Attending Ophthalmologists

Gordon M. Bruce, M.D.
John P. Macnie, M.D.
Charles A. Perera, M.D.
Raymond L. Pfeiffer, M.D.
Maynard C. Wheeler, M.D.

Associate Attending Ophthalmologists

Raynold N. Berke, M.D.
Howard D. H. Brown, M.D.
Willis S. Knighton, M.D.
Ludwig von Sallmann, M.D.

Assistant Attending Ophthalmologists

Frank D. Carroll, M.D.
J. Vincent Flack, M.D.
Frank Payne, M.D.
Osborn P. Perkins, M.D.
**M. Uribe Troncoso, M.D.
Joseph A. C. Wadsworth, M.D.

Assistant Ophthalmologists

C. Gregory Barer, M.D.
Graham Clark, M.D.
Robert McC. Day, M.D.
Andrew deRoetth, Jr., M.D.
Arnold W. Forrest, M.D.
C. Ray Franklin, M.D.
Ira Snow Jones, M.D.
Philip Knapp, M.D.
George R. Merriam, M.D.
Ellen F. Regan, M.D.

Assistant Ophthalmologists, Vanderbilt Clinic

Donald E. Tinkess, M.D.
John T. Worcester, M.D.

Residents

Carlos J. Margarida, M.D.
Daniel W. Mathias, M.D.
Paul B. Sullivan, M.D.

Assistant Residents

Robert P. Burns, M.D.
Charles J. Campbell, M.D.
Anthony Donn, M.D.
William G. Everett, M.D.
Floyd H. Farrant, M.D.
John W. McTigue, M.D.

Clinical Fellows

John M. Walcott, M.D.
A. Gardner Watson, M.D.

ORTHOPEDIC SURGERY
(New York Orthopaedic Dispensary and Hospital)

Director of Service

Alan DeForest Smith, M.D.

Attending Surgeons

Halford Hallock, M.D.
Leonidas Lantzounis, M.D.
Harrison L. McLaughlin, M.D.
Frank E. Stinchfield, M.D.

Associate Attending Surgeons

Everett C. Bragg, M.D.
Sawnie R. Gaston, M.D.
Frederick M. Smith, M.D.
William H. von Lackum, M.D.
Melvin B. Watkins, M.D.

Associate Attending Orthopedic Pathologist

C. Zent Garber, M.D.

*Leave of Absence
**Inactive

Assistant Attending Surgeons
George B. Ambrose, M.D.
Robert E. Carroll, M.D.
Frederick S. Craig, M.D.
Alexander Garcia, M.D.
D. Keith McElroy, M.D.
Charles S. Neer, II, M.D.
Charles T. Ryder, M.D.

Attending Surgeon, Vanderbilt Clinic
John C. McCauley, Jr., M.D.

Assistant Attending Surgeons, Vanderbilt Clinic
Herman Gladstone, M.D.
**Elliot W. Lawrance, M.D.
Alexander D. Papas, M.D.
Horace I-sen Yu, M.D.

Assistant Attending Surgeon, Mary Harkness Home
Edward M. Wheeler, M.D.

Annie C. Kane Fellows
Senior Fellow
Garry deN. Hough, M.D.

Senior Clinical Fellow
Balu Sankaran, M.D.

Junior Fellows
Fred H. Albee, Jr., M.D.
C. Andrew Bassett, M.D.
Edward F. Cadman, M.D.
Mariano Cooper, M.D.
Bernard Cooperman, M.D.
Arthur J. Driscoll, M.D.
Alfred Francis, M.D.
Thomas F. Hudgins, Jr., M.D.
James B. Jones, M.D.
Ann B. Whittlesey, M.D.
Daniel M. Winters, M.D.

Junior Clinical Fellows
Chien-Min Chen, M.D.
Afif Nsouli, M.D.
Zbigniew Sobol, M.D.
Max Vechter, M.D.

Assistant Residents
Duke B. Baird, M.D.
Frank A. Bersani, M.D.
John E. Carroll, Jr., M.D.
Kenneth C. Francis, M.D.
Ledford G. Gregory, M.D.
Charles C. Hall, M.D.
Rosamond Kane, M.D.
Bertram M. Kummel, M.D.
John D. LeBouvier, M.D.
Ralph Lusskin, M.D.
Robert L. Samilson, M.D.
Anthony J. Smith, M.D.

**Inactive

OTOLARYNGOLOGY

Director of Service
Edmund P. Fowler, Jr., M.D.

Attending Otolaryngologist
DeGraaf Woodman, M.D.

Associate Attending Otolaryngologists
Franz Altmann, M.D.
Daniel C. Baker, Jr., M.D.
George V. Browne, M.D.

Assistant Attending Otolaryngologists
Edwin B. Bilchick, M.D.
Sylvester Daly, M.D.
Herbert S. Friedman, M.D.
Bela Marquit, M.D.
Jules G. Waltner, M.D.

Assistant Otolaryngologists
Milos Basek, M.D.
Robert M. Hui, M.D.
Paul Lindenberg, M.D.
**Irving W. Voorhees, M.D.

Assistant Otolaryngologist, Vanderbilt Clinic
Peter D. Westerhoff, M.D.

Residents
Paul M. Brunelle, M.D.
Albert A. Cohen, M.D.

Assistant Residents
Richard J. Freeman, M.D.
Marion C. Insley, Jr., M.D.
Morris Kalmon, M.D.
Claude L. Pennington, M.D.
William B. Wladecki, M.D.

Clinical Fellows
Alfred Dietrich, M.D.
Cesare DiRocco, M.D.
Ange-Aime Gagne, M.D.
Stanley Whitfield, M.D.

PATHOLOGY

Director of Service
Harry Pratt Smith, M.D.

Attending Neuropathologist
Abner Wolf, M.D.

Associate Attending Pathologists
Dorothy H. Andersen, M.D.
Robert W. Coon, M.D.
Homer D. Kesten, M.D.
Wellington B. Stewart, M.D.

Associate Attending Neuropathologist
David Cowen, M.D.

Assistant Attending Pathologist
David M. Spain, M.D.

Assistant Neuropathologist
Mavis Kaufman, M.D.

Resident
William C. Yakovac, M.D.

Assistant Residents
Daniel W. Benninghoff, M.D.
Leonard V. Crowley, M.D.
S. Raymond Gambino, M.D.
Vincent P. Perna, M.D.

Clinical Fellows
Rodney S. Fowler, M.D.
Robert J. Imrie, M.D.

PEDIATRICS
(Babies Hospital)

Director of Service
Rustin McIntosh, M.D.

Attending Pediatricians
Hattie E. Alexander, M.D.
Alfred G. Langmann, M.D.

Associate Attending Pediatricians
John M. Brush, M.D.
J. Taylor Howell, Jr., M.D.
William S. Langford, M.D.
**Katherine K. Merritt, M.D.
Charles L. Wood, M.D.

Assistant Attending Pediatricians
John B. Ahouse, M.D.
Harry S. Altman, M.D.
Lilian A. Boker, M.D.
Robert W. Culbert, M.D.
Douglas S. Damrosch, M.D.
Paul A. di Sant'Agnese, M.D.
Ruth C. Harris, M.D.
**Charles A. Lang, M.D.
Aildred A. Macdonald, M.D.
Ralph E. Moloshok, M.D.
Conrad M. Riley, M.D.
William A. Silverman, M.D.
Milton Singer, M.D.
Paul S. Strong, M.D.
Agnes G. Wilson, M.D.
*Paul E. Wilson, M.D.
James A. Wolff, M.D.

*Leave of Absence
**Inactive

Assistant Pediatricians
Rose G. Ames, M.D.
William A. Bauman, M.D.
Albert Jules Beckman, M.D.
*Benjamin C. Berliner, M.D.
Saul Blatman, M.D.
Alexander Blum, Jr., M.D.
Hilde Bruch, M.D.
Lawrence Cassard, M.D.
Harvey Harold Corman, M.D.
Joseph A. Costa, M.D.
Ruth A. Davis, M.D.
Ruth Ursula Donovan, M.D.
Harlow D. Dunton, M.D.
Lavinia G. M. Fox, M.D.
Olga Frankel, M.D.
Alfred M. Freedman, M.D.
Oscar L. Frick, M.D.
Bernard German, M.D.
Rodman Gilder, Jr., M.D.
Daniel C. Hackett, M.D.
William E. Homan, M.D.
Phoebe Hudson, M.D.
Martin H. Jacobs, M.D.
Robert E. Jennings, M.D.
Joseph E. Kalbacher, M.D.
Walter R. Kessler, M.D.
John P. Lambert, M.D.
James H. Maroney, M.D.
Daniel Melia, M.D.
Kenneth M. Metcalf, M.D.
Rhoda M. Mickey, M.D.
Walter L. Mitchell, Jr., M.D.
Donald R. Reed, M.D.
Mary R. Richards, M.D.
Albert P. Rosen, M.D.
Mabel Ross, M.D.
Mary Hyman Samuels, M.D.
W. Russell Smith, M.D.
Raymond Sobel, M.D.
Katherine Sprunt, M.D.
David Stiles, M.D.
Virginia Strong, M.D.
Elizabeth Ufford, M.D.
Frederick H. von Hofe, M.D.
Virginia Van Geyt, M.D.
Robert West, M.D.
Robert C. Wheeler, M.D.
Daniel A. Wilcox, M.D.
Virginia Wilking, M.D.

Assistant Attending Pediatrician, Vanderbilt Clinic
Arthur F. Ackerman, M.D.

Assistant Pediatricians, Vanderbilt Clinic
Alfred L. Abrams, M.D.
Edward P. Duffy, Jr., M.D.

Assistant Pediatricians, Vanderbilt Clinic, Cont.

Samuel A. Edelman, M.D.
Rose Raquel Ellis, M.D.
Elizabeth Glogau Estrin, M.D.
Bertrand Etra, M.D.
Donald Ford, Jr., M.D.
Harold T. Fuerst, M.D.
Hyman H. Gordon, M.D.
George W. McCormick, M.D.
Thomas W. Patrick, Jr., M.D.
William H. Smith, M.D.
Hermann Vollmer, M.D.
William Wiley Whitten, M.D.

Resident

Peter R. Scaglione, M.D.

Assistant Residents

Mollie H. Allensworth, M.D.
Lionel M. Bargeron, Jr., M.D.
John S. Beresford, M.D.
Mary L. Bertucio, M.D.
Walter M. Chemris, M.D.
Solomon J. Cohen, M.D.
Adele O. Dellenbaugh, M.D.
Jack W. Garnant, M.D.
Herman Grossman, M.D.
Josephine M. Kerr, M.D.
Sheldon B. Korones, M.D.
Jerold F. Lucey, M.D.
Herbert E. Poch, M.D.
Roderick C. Richards, M.D.
Walter R. Stankewick, M.D.
Donald K. Stockdale, M.D.
Ernest M. Vandeweghe, M.D.
Stanley M. Vickers, M.D.

Clinical Fellows

Marvin L. Auerback, M.D.
John M. Bowman, M.D.
Clifford Golden, M.D.
James R. MacLean, M.D.
Garrison Rapmund, M.D.
Wei-liang Yu, M.D.

Visiting Fellows

Claudia E. Cambria, M.D.
Esther Liang, M.D.

PHYSICAL MEDICINE AND REHABILITATION

Director of Service

Robert C. Darling, M.D.

Attending Physician

William Benham Snow, M.D.

Assistant Attending Physicians

Cassius L. deVictoria, M.D.
A. David Gurewitsch, M.D.
Morton Hoberman, M.D.

Assistant Attending Physician, Vanderbilt Clinic

Edward E. Gordon, M.D.

Resident

Andreas R. Stadin, M.D.

Visiting Fellows

John A. Downey, M.D.
Milos J. Lota, M.D.
Lucille Tsu, M.D.
Shyh Jong Yue, M.D.

PSYCHIATRY

Director of Service

Lawrence C. Kolb, M.D.

Attending Psychiatrists

Irville H. MacKinnon, M.D.
Robert B. McGraw, M.D.

Associate Attending Psychiatrists

George E. Daniels, M.D.
William A. Horwitz, M.D.

Assistant Attending Psychiatrists

Lothar Gidro-Frank, M.D.
Kenneth Kelley, M.D.
**John A. P. Millet, M.D.

Associate Attending Psychiatrists, Vanderbilt Clinic

A. Louise Brush, M.D.
Roy D. Craig, M.D.
Lawson G. Lowrey, M.D.
William A. Schonfeld, M.D.
Edward S. Tauber, M.D.
Adolf Zeckel, M.D.

Assistant Attending Psychiatrists, Vanderbilt Clinic

Edith M. Buyer, M.D.
Robert J. Mearin, M.D.
Alfred Schick, M.D.
Martin Schreiber, M.D.
Sonia S. Stirt, M.D.

Assistant Psychiatrists, Vanderbilt Clinic

Alan B. Adam, M.D.
Andre K. Allen, M.D.
Antonio M. Bottino, M.D.
William A. Brooks, M.D.
Elizabeth L. Bryan, M.D.
Ralph J. Carotenuto, M.D.

**Inactive

Assistant Psychiatrists, Vanderbilt Clinic, Cont.

Hyman Chartock, M.D.
Lilli Cobliner, M.D.
Ralph B. Dawson, M.D.
*John A. Frank, M.D.
Martha L. Gassmann, M.D.
Renatus Hartogs, M.D.
George A. Jervis, M.D.
Eva L. Klein, M.D.
Camella A. Losada, M.D.
Hugh McHugh, M.D.
Joost A. M. Meerloo, M.D.
Theodore Meltzer, M.D.
Hugh Mullan, M.D.
**Elizabeth Nesbitt, M.D.
John F. Oliven, M.D.
*Eda L. Priest, M.D.
David M. Rudin, M.D.
Percy E. Ryberg, M.D.
Leonard Scheinman, M.D.
Jacob Weinless, M.D.

Junior Assistant Psychiatrists, Vanderbilt Clinic

Donald B. Douglas, M.D.
*Margaret M. Lawrence, M.D.
*Norman D. Lazar, M.D.
*Seymour C. Post, M.D.
James Wendell Watson, M.D.
Frederick M. Weissman, M.D.

Psychologist, Vanderbilt Clinic

*Zygmunt A. L. Piotrowski, Ph.D.

RADIOLOGY

Acting Director of Service

Harold W. Jacox, M.D.

Attending Radiologist

John Caffey, M.D.

Assistant Attending Radiologists

Morton M. Kligerman, M.D.
Juan M. Taveras, M.D.
Josephine Wells, M.D.
Russell Wigh, M.D.

Assistant Radiologists

Meyer Alpert, M.D.
Donald J. Barnett, M.D.
Robert G. Bogen, M.D.
Francis M. Cummins, M.D.
Catherine J. Dalton, M.D.
Joan Eliasoph, M.D.
Robert H. Freiberger, M.D.
James Luther Jarvis, M.D.
Julian Mandell, M.D.
Jerome Nadelhaft, M.D.
Louis A. Rottenberg, M.D.

Assistant Radiologists, Cont.

Gerhart S. Schwarz, M.D.
Ralph Schlaeger, M.D.
Norah duV. Tapley, M.D.

Residents

Kent Ellis, M.D.
Anna Silverman, M.D.

Assistant Residents

Robert A. Evans, M.D.
Ezekiel Freed, M.D.
Walton W. Hamilton, M.D.
David Hayes, M.D.
Robert J. Hockstim, M.D.
Donald W. Johnson, M.D.
Philip M. Johnson, M.D.
Rob H. Kirkpatrick, M.D.
Samuel H. Madell, M.D.
James M. Monaghan, M.D.
Eleanor Dino Montague, M.D.
Joseph M. Moynahan, M.D.
E. Finch Parsons, M.D.

Visiting Fellows

Ahmet Rehai Islam, M.D.
Heinz Oeser, M.D.
Fred Thyng, M.D.
Jo Kian Tjaij, M.D.

SURGERY

Director of Service

George H. Humphreys, II, M.D.

Attending Surgeons

Edward J. Donovan, M.D.
Robert H. E. Elliott, Jr., M.D.
Arnold J. Kremen, M.D.
Frank L. Meleney, M.D.
Rudolph N. Schullinger, M.D.
Lawrence W. Sloan, M.D.
Thomas W. Stevenson, Jr., M.D.
Robert H. Wylie, M.D.

Associate Attending Surgeons

Arthur H. Blakemore, M.D.
David C. Bull, M.D.
Henry S. F. Cooper, M.D.
Ralph A. Deterling, Jr., M.D.
Robert S. Grinnell, M.D.
Cushman D. Haagensen, M.D.
David V. Habif, M.D.
Harold D. Harvey, M.D.
Edward L. Howes, M.D.
Herbert C. Maier, M.D.
Ferdinand F. McAllister, M.D.

*Leave of Absence
**Inactive

Associate Attending Surgeons, Cont.
Richmond L. Moore, M.D.
Milton R. Porter, M.D.

Assistant Attending Surgeons
Hugh Auchincloss, Jr., M.D.
Harold G. Barker, M.D.
George Francis Crikelair, M.D.
Jose M. Ferrer, Jr., M.D.
*Charles W. Findlay, Jr., M.D.
Edmund N. Goodman, M.D.
Frederic Pratt Herter, M.D.
*Robert B. Hiatt, M.D.
Maurice J. Hickey, M.D., D.D.S.
John F. Prudden, M.D.
Thomas V. Santulli, M.D.
John Scudder, M.D.
Edward B. Self, M.D.
Joseph Arthur Tamerin, M.D.
Philip D. Wiedel, M.D.

Assistant Surgeons
Robin M. Rankow, M.D.
Alfred Jaretzki, III, M.D.

Assistant Attending Surgeons, Vanderbilt Clinic
Charles H. C. Beakes, M.D.
Grant Sanger, M.D.
Gordon McK. Stevenson, M.D.

Assistant Surgeons, Vanderbilt Clinic
Morris R. Bradner, Jr., M.D.
James R. Breed, M.D.
Ben Marr Lanman, M.D.
Stephen H. M. Plum, M.D.
D. Barton Stevens, M.D.
Alfred D. Young, M.D.

Attending Surgical Pathologists
Virginia Kneeland Frantz, M.D.
Raffaele Lattes, M.D.

Assistant Surgical Pathologist
Nathan Lane, M.D.

Residents
Carl R. Feind, M.D.
Hugh F. Fitzpatrick, M.D.
Frederick P. Heald, M.D.
Robert W. Holliday, M.D.
Samuel R. Powers, M.D.
Frederick R. Randall, M.D.
James B. Rodgers, M.D.
Daniel M. Shapiro, M.D.
Clare A. Stein, M.D.
Edgar A. Storli, M.D.
Lester L. Vargas, M.D.
Arthur B. Voorhees, Jr., M.D.

Assistant Residents
Arthur H. Aufses, Jr., M.D.
Walter F. Ballinger, II, M.D.
Carl M. Barlow, M.D.
Richard C. Britton, M.D.
C. Herbert Fredell, M.D.
John S. Hegeman, M.D.
Cyrus Houshmand, M.D.
George A. Hyde, Jr., M.D.
Julius H. Jacobson, M.D.
Sheldon M. Levin, M.D.
Henry W. Louria, Jr., M.D.
James R. Malm, M.D.
Alfred M. Markowitz, M.D.
Roy McKittrick, M.D.
Robert T. Potter, M.D.
Keith Reemtsma, M.D.
Albert Starr, M.D.
Francis C. Symonds, M.D.
Sanford Weissman, M.D.
John C. Williams, Jr., M.D.
John M. Wilson, Jr., M.D.

Interns
Ronald H. Allen, M.D.
Harold T. Brew, Jr., M.D.
Edward F. Conklin, M.D.
Louis R. DelGuercio, M.D.
Stanley Edelman, M.D.
Gardner F. Fay, M.D.
Harold Haft, M.D.
Norman A. Hill, M.D.
Thomas C. King, M.D.
Richard J. Kitz, M.D.
George Kleinfeld, M.D.
France A. Laux, M.D.
Leroy W. McDaniel, M.D.
John C. Norman, Jr., M.D.
Ronald R. Pfister, M.D.
Robert A. Rubin, M.D.
Robert A. Salerno, M.D.
Anthony Shaw, M.D.
Erwin N. Whitman, M.D.

Clinical Fellows
Don Otto Gore, M.D.
Alfredo B. Rehbein, M.D.

Residents
Thoracic Surgery
Jay L. Ankeney, M.D.
John L. Kee, Jr., M.D.

Residents
Plastic Surgery
Hector Barisone, M.D.
Alberto Rigau, M.D.

*Leave of Absence

Assistant Residents
Plastic Surgery
Lowyd Ballantyne, M.D.
Orville J. Mirehouse, M.D.

Clinical Fellow
Plastic Surgery
Vahram Y. Bakamjian, M.D.

Residents
Surgical Pathology
Sidney Z. Gellman, M.D.
W. Arthur Harland, M.D.
Fritz M. Liebman, M.D.
Robert R. Williams, M.D.

UROLOGY
(J. Bentley Squier Urological Clinic)

Director of Service
George F. Cahill, M.D.

Attending Urologist
George W. Fish, M.D.

Assistant Attending Urologists
Charles T. Hazzard, M.D.
John N. Robinson, M.D.

Assistant Urologists
Stanley B. Braham, M.D.
Perry B. Hudson, M.D.
John K. Lattimer, M.D.
Meyer M. Melicow, M.D.
Reginald F. Seidel, M.D.
Thomas J. Sullivan, M.D.
Ralph J. Veenema, M.D.
Ralph C. Yeaw, M.D.

Assistant Urologists,
Vanderbilt Clinic
Frederick S. Dick, M.D.
Robert Kollmar, M.D.
Stanford Pulrang, M.D.
Arthur T. Willetts, M.D.

Resident
Edward T. Rafferty, M.D.

Assistant Residents
Archie L. Dean, Jr., M.D.
J. Timothy Donovan, M.D.
Clement A. Furey, Jr., M.D.
M. Eugene Speicher, M.D.

Clinical Fellows
Leonard J. Sullivan, M.D.
Aurelio Calvo Uson, M.D.

VANDERBILT CLINIC

CHIEFS OF CLINICS

Dr. Ernest Salanitre, *Anesthesiology*
Dr. J. Lowry Miller, *Dermatology*
Dr. Albert R. Lamb, Jr., *Medicine (Group Clinic)*
Dr. Edward B. Schlesinger, *Neurological Surgery*
Dr. Daniel Sciarra, *Neurology*
Dr. C. Paul O'Connell, *Obstetrics and Gynecology*
Dr. Maynard C.Wheeler, *Ophthalmology*
Dr. Halford Hallock, *Orthopedic Surgery*
Dr. Edwin B. Bilchick, *Otolaryngology*
Dr. William A. Bauman, *Pediatrics*
Dr. Morton Hoberman, *Physical Medicine and Rehabilitation*
Dr. Robert B. McGraw, *Psychiatry*
Dr. Thomas V. Santulli, *Surgery*
Dr. Charles T. Hazzard, *Urology*

Appendix

APPENDIX

Statistics

BED COMPLEMENT, DECEMBER 31, 1954

	No. Beds	
PRIVATE:		
Presbyterian Hospital (Harkness Pavilion)	186	
Babies Hospital	9	
Eye Institute	19	
Neurological Institute	48	
Sloane Hospital	34	
Total Private		296
SEMI-PRIVATE:		
Presbyterian Hospital and Sloane Hospital:		
All Services (Harkness Pavilion)	97	
Medicine	16	
Surgery	14	
Urology	31	
Orthopedic	40	
Ear, Nose and Throat	9	
Gynecology	13	
Obstetrics	29	
Babies Hospital	30	
Eye Institute	36	
Neurological Institute	39	
Total Semi-Private		354
WARD:		
Presbyterian Hospital and Sloane Hospital:		
Medicine	116	
Surgery	114	
Urology	36	
Orthopedic	83	
Ear, Nose and Throat	24	
Admitting	14	
Gynecology	35	
Obstetrics	81	
Babies Hospital (including premature nursery of 23 incubators)	152	
Eye Institute	37	
Neurological Institute	124	
Total Ward		816
		1,466
MARY HARKNESS CONVALESCENT HOME		57
		1,523
NEWBORNS (Sloane Hospital)		130
Total		1,653

HOSPITAL ADMISSIONS

	Admissions 1954	1953
PRIVATE:		
Presbyterian Hospital (Harkness Pavilion)	5,008	4,777
Babies Hospital	341	370
Eye Institute	516	450
Neurological Institute	1,044	853
Sloane Hospital	918	967
Total Private	7,827	7,417
SEMI-PRIVATE:		
Presbyterian Hospital and Sloane Hospital:		
All Services (Harkness Pavilion)	2,717	2,982
Medicine	239	236
Surgery	304	330
Urology	609	590
Orthopedic	673	584
Ear, Nose and Throat	606	701
Gynecology	562	594
Obstetrics	1,002	1,080
Babies Hospital	1,359	1,381
Eye Institute	1,244	1,125
Neurological Institute	881	926
Total Semi-Private	10,196	10,529
WARD:		
Presbyterian Hospital and Sloane Hospital:		
Medicine	1,721	1,754
Surgery	1,801	1,876
Urology	662	613
Orthopedic	1,176	1,253
Ear, Nose and Throat	958	893
Admitting	1,363	1,482
Gynecology	903	902
Obstetrics	3,522	3,252
Babies Hospital	2,655	2,825
Eye Institute	1,107	1,153
Neurological Institute	1,814	1,836
Total Ward	17,682	17,839
MARY HARKNESS CONVALESCENT HOME	724	708
Total	36,429	36,493
INFANTS BORN IN SLOANE HOSPITAL:		
Private beds	513	571
Semi-private and Ward beds	3,328	3,186
Total	3,841	3,757

HOSPITAL OCCUPANCY

	Patient Days Care		*Percentage of Occupancy*	
	1954	*1953*	*1954*	*1953*
PRIVATE:				
Presbyterian Hospital (Harkness Pavilion)	62,973	61,446	92.8	90.5
Babies Hospital	1,681	1,527	51.2	46.5
Eye Institute	5,289	4,704	76.3	67.8
Neurological Institute	15,386	14,717	87.8	84.0
Sloane Hospital	7,550	8,393	60.8	67.6
Total Private	92,879	90,787	86.0	84.0
SEMI-PRIVATE:				
Presbyterian Hospital and Sloane Hospital:				
All Services (Harkness Pavilion)	27,361	26,803	77.3	75.7
Medicine	5,546	5,459	95.0	93.5
Surgery	4,820	4,611	94.3	90.2
Urology	7,027	6,972	62.1	61.6
Orthopedic	10,607	8,082	81.0	79.1
Ear, Nose and Throat	2,932	3,345	89.3	101.8
Gynecology	5,228	5,468	110.2	115.2
Obstetrics	7,791	8,125	73.6	76.8
Babies Hospital	9,141	8,605	83.5	78.6
Eye Institute	8,591	7,548	75.3	73.9
Neurological Institute	12,993	14,861	91.3	104.4
Total Semi-Private	102,037	99,879	81.0	81.9
WARD:				
Presbyterian Hospital and Sloane Hospital:				
Medicine	38,390	38,508	90.7	90.9
Surgery	34,630	33,986	83.2	81.7
Urology	12,005	11,528	91.4	87.7
Orthopedic	26,300	29,260	82.7	84.4
Ear, Nose and Throat	5,836	5,591	66.6	63.8
Admitting	2,658	2,731	52.0	53.4
Gynecology	12,164	12,247	95.2	95.9
Obstetrics	25,099	23,318	84.9	78.9
Babies Hospital	36,794	39,884	66.3	71.9
Eye Institute	9,727	10,159	63.9	61.9
Neurological Institute	34,988	36,746	77.3	81.2
Total Ward	238,591	243,958	79.2	79.9
MARY HARKNESS CONVALESCENT HOME	15,615	15,632	75.1	75.1
Total	449,122	450,256	80.8	81.0
INFANTS BORN IN SLOANE HOSPITAL:				
Private beds	4,359	4,743	29.9	32.5
Semi-private and Ward beds	23,091	22,843	70.3	69.5
Total	27,450	27,586	57.9	58.1

OUT-PATIENT DEPARTMENT STATISTICS

	1954	*1953*
Summary of Patients Treated:		
Number of Patients treated	56,430	52,144
Number of visits:		
Free	110,762	102,744
Pay	294,875	282,649
Total	405,637	385,393
Average visits per working day	1,528	1,412

Attendance Statistics:	*New to Clinics*	*Revisits*	*Total Visits*
Dermatology	6,653	27,032	33,685
Emergency and Admitting Wards	19,735	552	20,287
Group Clinic	3,984	19,987	23,971
Medicine	17,012	40,622	57,634
Neurology	2,288	13,764	16,052
Obstetrics and Gynecology	6,160	35,928	42,088
Occupational Therapy	89	1,406	1,495
Ophthalmology	5,027	23,830	28,857
Orthopedic	8,251	30,907	39,158
Otolaryngology	3,708	13,454	17,162
Pediatrics	5,987	38,353	44,340
Physical Therapy	1,857	19,246	21,103
Psychiatry	239	4,785	5,024
Surgery	14,030	31,768	45,798
Urology	1,250	7,733	8,983
Total	96,270	309,367	405,637

PERSONNEL STATISTICS

	On Duty December 31	
	1954	*1953*
Administration	17	16
Assistant Secretary-Treasurer	42	43
Comptroller	92	87
Public Interest	11	11
Convalescent Home	43	44
Non-Professional Services:		
Buildings and Grounds	580	563
Food Service	373	366
Personnel and Protective	67	67
Other Non-Professional Services	194	184
Professional Services:		
Nursing	1,161	1,177
Professional Staff, Doctors' Offices & Research	377	368
Vanderbilt Clinic and Ancillary Services	624	616
Total	3,581	3,542
Student Nurses	457	447
Volunteer Workers	344	289

THE ALUMNAE ASSOCIATION OF THE SCHOOL OF NURSING OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK, INC.

BALANCE SHEET, DECEMBER 31, 1954 AND 1953

ASSETS

	1954	*1953*
Capital Funds—securities and cash	$501,060.09	$505,969.73
Operating Funds—securities, cash, etc.	12,044.47	11,243.54
Total Assets	$513,104.56	$517,213.27

LIABILITIES

Capital Fund Reserves:		
General fund	$ 8,910.33	$ 15,480.70
Benefit fund	136,586.03	134,710.62
Pension fund	309,400.13	310,037.01
Emma B. Kennedy Scholarship fund	22,871.56	23,163.97
Memorial Scholarship fund, '20	2,239.14	2,267.87
Helen Young Scholarship fund	18,877.68	18,410.09
Richard William Walsh Scholarship fund	1,184.15	1,199.47
Ruth C. Williams Scholarship fund	991.07	700.00
Total capital fund reserves	$501,060.09	$505,969.73
Operating Funds Reserves	$ 12,044.47	$ 11,243.54
Total Liabilities	$513,104.56	$517,213.27

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS

Cash on hand January 1	$ 7,309.23	$ 7,034.15
Receipts:		
Sale of securities	$ 19,395.90	$ 20,890.42
Investment income	24,855.03	23,310.94
Donations	7,828.98	8,103.70
Dues and initiation fees	10,061.99	8,662.33
Dinner to graduating class	361.00	438.00
Loans repaid, etc.	790.69	1,150.77
Total Receipts	$ 63,293.59	$ 62,556.16
	$ 70,602.82	$ 69,590.31
Disbursements:		
Purchase of securities	$ 23,670.02	$ 29,040.43
Clerical expense and fees	4,239.50	4,522.75
Pensions and benefits paid	15,465.00	13,520.00
Scholarship granted	4,966.66	3,208.33
Loans granted		200.00
Donations	200.00	300.00
Printing, stationery and postage	13,207.68	5,945.09
Entertainment of graduating class	2,000.97	2,238.49
Miscellaneous	1,341.95	3,305.99
Total Disbursements	$ 65,091.78	$ 62,281.08
Cash on hand December 31	$ 5,511.04	$ 7,309.23

HELEN YOUNG,
Treasurer

BABIES HOSPITAL BOARD OF WOMEN MANAGERS

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE AUXILIARY FOR THE YEARS 1954 AND 1953

	1954	*1953*
Balance, January 1	$ None	$ 1,332.52*
Receipts:		
Membership dues	$ 435.00	$ 230.00
United Hospital Fund	5,256.24	4,681.87
Greater New York Fund	5,816.76	5,977.01
Total Receipts	$11,508.00	$10,888.88
	$11,508.00	$ 9,556.36
Disbursements:		
To Babies Hospital for:		
Emergency Nursing	$ 5,000.00	$ 2,916.66
Pediatric Psychiatric Clinic	1,500.00	1,500.00
Recreational Therapy	4,500.00	4,500.00
Fund for Cleft Palate Cases		334.95
Decorations, furniture and equipment, etc.	314.25	281.35
Miscellaneous	28.60	23.40
Total Disbursements	$11,342.85	$ 9,556.36
Balance, December 31	$ 165.15	$ None

Julia M. Thieriot,
Treasurer

* Overexpended

BABIES HOSPITAL BOARD OF WOMEN MANAGERS

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE CRIBSIDE SOCIAL SERVICE COMMITTEE FOR THE YEARS 1954 AND 1953

	1954	*1953*
Balance, January 1	$ 1,732.95*	$ 490.32
Receipts:		
Membership dues	$ 150.00	$ 150.00
Donations	51.00	384.20
United Hospital Fund	7,326.36	6,567.63
Greater New York Fund	8,107.64	8,384.41
Investment income	602.68	572.43
Bargain Box Thrift Shop	1,869.04	
Nearly New Shop	303.84	752.25
Sewing Class dues and receipts	487.59	521.52
Repayments by patients of advances and loans	913.50	1,137.01
Total Receipts	$19,811.65	$18,469.45
	$18,078.70	$18,959.77
Disbursements:		
Social service salaries	$15,351.00	$16,163.22
Travel of social service staff	107.87	84.18
Conference expenses, dues, subscriptions and meetings	78.66	263.73
Convalescent care	785.96	983.29
Advances to patients for convalescent care and miscellaneous loans	913.50	1,137.01
Relief assistance and extra for patients:		
Clothing	775.13	771.32
Milk and food	109.60	476.61
Christmas and Thanksgiving	187.13	227.18
Other	25.62	190.99
Miscellaneous	53.92	395.19
Total Disbursements	$18,388.39	$20,692.72
Balance, December 31	$ 309.69*	$ 1,732.95*

EDITH B. FENNELLY,
Chairman

* Overexpended

THE NEUROLOGICAL INSTITUTE AUXILIARY OF THE BOARD OF TRUSTEES OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1954 AND 1953

	1954	*1953*
Balance, January 1	$21,180.94	$10,333.58
Receipts:		
Donations	$ 1,741.00	$ 2,178.00
United Hospital Fund	11,274.83	10,111.54
Greater New York Fund	12,477.17	12,908.68
Everybody's Thrift Shop	9,279.07	6,111.84
Repayments by patients of advances and loans	716.00	1,376.70
Total Receipts	$35,488.07	$32,686.76
	$56,669.01	$43,020.34
Disbursements:		
Social service salaries	$21,367.84	$16,664.57
To Neurological Institute for Library	100.00	100.00
Advances to patients for summer therapeutic care and miscellaneous	716.00	1,376.70
Summer therapeutic care	1,524.00	1,449.42
Chronic care	129.40	315.06
Medical relief	721.10	1,259.02
Recreation of patients	15.19	155.00
Staff travel, field and conference	137.67	127.79
Miscellaneous, postage, telephone and publications	577.39	391.84
Total Disbursements	$25,288.59	$21,839.40
Balance, December 31	$31,380.42	$21,180.94

Helen Hoyt Stookey,
Chairman

THE WOMEN'S AUXILIARY NEW YORK ORTHOPAEDIC DISPENSARY AND HOSPITAL OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1954 AND 1953

	1954	*1953*
Balance, January 1	$2,783.57	$ 19.01*
Receipts:		
Donations	$ 650.00	$ 927.00
Allocation from United Hospital Fund and Greater New York Fund Distribution	4,000.00	5,000.00
Total Receipts	$4,650.00	$5,927.00
	$7,433.57	$5,907.99
Disbursements:		
Recreational therapist salary	$3,168.98	$2,465.71
Other recreational therapy expenses	824.81	658.71
Total Disbursements	$3,993.79	$3,124.42
Balance, December 31	$3,439.78	$2,783.57

PAMELA F. FURSE,
Treasurer

* Overexpended

WOMEN'S AUXILIARY OF THE BOARD OF TRUSTEES OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1954 AND 1953

	1954	*1953*
Balance, January 1	$ 7,932.33	$ 7,175.84
Receipts:		
Membership dues	$ 580.00	$ 585.00
United Hospital Fund	7,097.56	6,372.55
Greater New York Fund	7,854.44	8,135.37
Donations	182.90	55.00
Everybody's Thrift Shop		4,778.87
Stuyvesant Square Thrift Shop	3,389.28	970.80
Total Receipts	$19,104.18	$20,897.59
	$27,036.51	$28,073.43
Disbursements:		
To Presbyterian Hospital for:		
Occupational Therapy	$ 6,000.00	$ 7,500.00
Library	4,160.00	2,400.00
Volunteer Service	6,999.26	3,612.73
Residents' Loan Fund		6,000.00
Furnishings for Women's Lounge	2,762.18	
Miscellaneous	605.33	628.37
Total Disbursements	$20,526.77	$20,141.10
Balance, December 31	$ 6,509.74	$ 7,932.33

AUDREY B. SCHULLINGER,
Treasurer

(1) A gift of $10,000 shall entitle the donor to nominate a patient to use and occupy one bed in the common wards of the Hospital free of charge (except for special service) for not more than ninety days in any one year.

The donor may at the time of making the gift appoint to another in his stead such right to nominate, provided the appointee is acceptable to the Hospital.

Such right to nominate may be exercised only:—

(*a*) During the life of the person having the right to nominate, if such right is in an individual.

(*b*) For a period of fifteen years, if such right is in a Corporation, Society or Association.

(2) Endowed Bed privileges are subject to all rules and regulations governing the admission, treatment, and discharge of patients.

(3) The Board of Trustees may in their discretion under special circumstances accept gifts for the endowment of beds on such other terms and conditions as they may deem best calculated to promote the objects for which the Hospital was established and is maintained.

Memorial Endowed Beds for Research Purposes

A gift of $10,000 shall entitle the donor to establish as a permanent memorial one memorial endowed bed for research purposes in a ward of the Hospital to be used and occupied by patients free of charge, except for special service.

The President of the Medical Board shall, subject to the approval of the Vice-President and General Manager of the Hospital have the privilege of nominating patients to use and occupy a Memorial Endowed Bed for Research Purposes for not more than 90 days in any one year for a period of 15 years, subject to all rules and regulations governing the admission, treatment and discharge of patients. This privilege shall be assigned to the persons occupying these respective offices (President of the Medical Board and Vice-President and General Manager of the Hospital) at the time the nomination is made.

ENDOWED BEDS AND ROOMS

Presbyterian Hospital

1868 Mary J. Gelston
1870 Henrietta A. Lenox (2 Beds)
Washington R. Vermilyea
A. R. Wetmore
1871 John Laurie
Mary Ann Parish
1872 William Earl Dodge
John T. Johnston
Otis D. Swan
Henry Young (2 Beds)
1873 James Brown (2 Beds)
John R. Ford
Jonathan Sturges
1878 James G. and Henry G. deForest, in memory of Lockwood deForest Woodruff, M.D.
1880 William C. Rhinelander
1881 Jennet L. and Robert L. Belknap, in memory of Aaron B. Belknap
Fifth Avenue Presbyterian Church
Henry B. Hyde, in memory of his son, Henry B. Hyde, Jr.
John Stewart Kennedy

Frederick and Henry G. Marquand
Edwin D. Morgan (3 Beds)
Mary L. Sheafe
John L. Proudfit
1882 Heber R. Bishop (3 Beds)
Mrs. Robert L. Stuart, in memory of her father, Robert McCrea
Edwin D. Morgan
Mrs. Moses Taylor
1883 Frederick Billings
Reformed Protestant Dutch Church of the City of New York
1884 Nathaniel W. Conkling
West Presbyterian Church, to be known as "Faith Presbyterian Church Bed"
Madison Square Presbyterian Church, in memory of George W. Lane
1885 Brick Presbyterian Church, in memory of Dr. John G. Adams
Richard Irvin
1886 Frederick Baker, in memory of Sarah Pyewell Baker
Edward L. Beadle
Brick Presbyterian Church, in memory of Miss Ann Adams
Peter Cumming, in memory of Francis P. Schoals
George E. Dodge
Horace F. Hutchinson, in memory of Ellen B. Schoals
Mr. and Mrs. William D. Sloane, in memory of their son, William D. Sloane, Jr.
Henry S. Wilson, in memory of his son, Harry H. Wilson
1887 Fifth Avenue Presbyterian Church
1888 Broadway Tabernacle Society
Samuel Inslee, in memory of Kate J. Inslee
1889 John Sloane, in memory of his mother, Euphemia Sloane
1890 Isaac V. Brokaw, in memory of Ernest B. Brokaw
Sidney Dillon, in memory of Hannah Dillon
Ambrose K. Ely
Josiah M. Fiske
O. B. Jennings
Mrs. John Stewart Kennedy
Amelia Kerr
Robert Marshall
Elizabeth S. and Emily M. Wheeler, in memory of James Boorman
"The Davenport Bed"
1891 Sarah A. Havemeyer, in memory of her son, Hector C. Havemeyer
Thomas Hope
John E. Parsons, in memory of his children, E. L. P., K. M. P., and R. M. P.
Mrs. A. R. Van Nest, in memory of her husband, Abram R. Van Nest
1892 John Stewart Kennedy, in memory of his niece, Emma Stewart Baker
Alexander Maitland, in memory of his mother, Mary C. Maitland
1893 Maria S. Auchincloss, in memory of her husband, Edgar S. Auchincloss
Frances T. Lord, in memory of her husband, George deForest Lord
Presbyterian Church on University Place
Presbyterian Home for Aged Women
Margaret A. Sinclair, in memory of Mr. and Mrs. James Sinclair
West-Park Presbyterian Church
Young Men's Christian Association
1895 Mary Harrison
Mrs. Clarence M. Hyde, in memory of her mother, Rebecca Babbitt
John Stewart Kennedy, in memory of Mrs. Robert L. Stewart
Mrs. James T. Murray, in memory of her husband, James T. Murray
1896 Anthony Dey, in memory of Joseph G. and Eliza D. Scott
Jane Hope
Esther J. Jennings, in memory of her husband, Oliver B. Jennings
1897 Mrs. Francis E. Baker, in memory of her father, James Rich Steers
William S. Brown
Helen Miller Gould, in memory of her parents, Mr. and Mrs. Jay Gould
Margarette E. and Susan D. Griffith, in memory of their father, Griffith W. Griffith

Mary J. Griffith, in memory of her husband, Griffith W. Griffith
Rachel L. Kennedy, in memory of her mother, Mrs. Rachel C. Kennedy
Annie S. Paton, in memory of her husband, William Paton
Charlotte H. Skidmore, to be known as "The William L. Skidmore Bed"

1898 Brick Presbyterian Church
Matilda A. Brown, in memory of her son, H. Auchincloss Brown
First Presbyterian Church
Mrs. Stephen V. Harkness, in memory of her daughter, Florence Harkness
Jane Hope, in memory of her mother, Grace Corrie Hope
John Stewart Kennedy, in memory of Rev. William G. Schauffler, D.D., L.L.D.
Mrs. Elliott F. Shepard, in memory of her daughter, Florence Vanderbilt Shepard
Mrs. Elliott F. Shepard, in memory of her daughter, Marguerite Shepard

1899 William W. Cole, in memory of his mother, Mary A. Cole
William Whitewright, in memory of his father, William Whitewright, "The Whitewright Beds" (10 Beds)

1900 Emily B. Hopkins, in memory of her husband, Moses Hopkins, "Moses Hopkins Memorial"
Donald MacKay, in memory of his children, Edith Winslow and Walter Wise MacKay
Caroline L. Macy, in memory of her daughter, Mary M. K. Willets
Laura Roome, in memory of her sons, Harry and Alfred Roome
Martha L. St. John, in memory of her mother, Sarah Ward
Nathaniel Whitman

1901 Julia Billings, in memory of her husband, Frederick Billings
Camilla L. Edwards, in memory of her husband, Walter Edwards
Andrew J. Garvey, in memory of his mother, Elizabeth Jeffries Garvey (2 Beds)
George Lauder
Charles H. Marshall
Justine Adele Stafford, in memory of her father, Justin A. Bliss

1902 Robert Graham Dun
Margaret J. Plant, in memory of her brother, Simon Loughman

1903 Heber R. Bishop
Lura Currier
Mrs. Francis B. Harrison
Julia J. MacCartee, in memory of her husband, Robert MacCartee
Madison Avenue Reformed Church
Adela Berry Sloane, in memory of her father, Abraham J. Berry, M.D.
Justine Adele Stafford, in memory of her mother, Eveline C. Bliss
John T. Terry

1904 Virginia E. Fowler, in memory of Clarence E. Fowler
Susan Bevier
Mrs. William Starr Miller
Josephine Penfold, in memory of Dr. Edward Livingston Trudeau, Jr.
Peter Reid, in memory of his wife, Jane Watson Reid
Francis A. Palmer

1905 Frederick G. Bourne
Helen C. Inslee, in memory of her husband, Samuel Inslee
Titus B. Meigs, in memory of his son, Titus B. Meigs, Jr.
Mrs. James T. Murray, in memory of Rev. John Hall, D.D., L.L.D.
Sarah J. Parsons, in memory of her husband, Charles Parsons
Presbyterian Church on University Place

1906 Maria L. Campbell, in memory of Henry Pearsall Campbell
Susan W. Duncan, in memory of her husband, John P. Duncan
Samuel Keyser (3 Beds)
Sara Pyle McAlpin and James Tolman Pyle, in memory of their father, William Scott Pyle
Reformed Protestant Dutch Church of Garden Street
John Sloane, in memory of his brother, Thomas Chalmers Sloane
John Sloane, in memory of his father, William Sloane

1908 William R. Craig, in memory of his sister, Florence Faxon Craig
George B. Goldschmidt, in memory of his mother, Celestine Goldschmidt
Samuel Anthony Goldschmidt, in memory of his mother, Celestine Goldschmidt

Mrs. Stephen V. Harkness, in memory of her husband, Stephen V. Harkness
Charles H. Marshall, Jr.
1909 Rev. and Mrs. Robert Russell Booth, in memory of "Minnie and Willie"
Canadian Society of New York
Edward West Currier, in memory of his stepmother, Laura Currier
Edward West Currier, in memory of his stepbrother, Walter B. Currier
Edward West Currier, in memory of Edward W. Currier
Mary Jane Johnson, in memory of her husband, William H. Johnson
J. Theresa Keyser, in memory of her husband, Samuel Keyser
Julia Hannon Lyle
Winfield Tucker, in memory of Joseph, Isabelle and Adeline (3 Beds)
J. Spencer Turner, in memory of his first wife, Cornelia J. Turner
1910 Jane A. Townsend, in memory of her son, Randolph W. Townsend, Jr.
Jane A. Townsend, in memory of her son, Harmon W. Norton
Jane A. Townsend, in memory of her daughter, Emma L. Norton
Amelia Mott Graham, in memory of Malcolm Graham
Adeline Ives Latham, in memory of her husband, John Howard Latham
Josephine G. Lord, in memory of her husband, Franklin B. Lord
1911 Brearley School Girls and others interested, in memory of Madam Bertha Beck, "Madam Beck Memorial Teacher's Bed"
Harriet Coles, in memory of her sisters, Susan and Anna Codman
Caroline Thorn Kissel, in memory of her husband, Gustav Edward Kissel
Katherine Spencer Leavitt, in memory of her husband, Rev. William Leavitt (2 Beds)
Reformed Low Dutch Church of Harlem
Frederick Sturges, in memory of his father, Jonathan Sturges
William Stuart Tod, in memory of his brother, George Tod
1912 Melville de Wolf, in Children's Ward, "Emma de Wolf Bed"
Gustavia A. Senff, in memory of her husband, Charles A. Senff
1913 Mrs. Christopher M. Bell, "The Dennistoun Bed"
Cornelia Eaton, to be known as "The Dr. Reuben S. Carpentier Memorial" (3 Beds)
Mrs. Jeremiah V. Meserole, in memory of her son, Abraham Meserole
Josephine Penfold
Jane G. Phelps, in memory of her husband, Anson G. Phelps, Jr. (2 Beds)
1914 Hugh D. Auchincloss, in memory of his mother, Elizabeth Auchincloss
Jane Elizabeth Grannis, in memory of her mother, "Charlotte Williams Platt Bed"
William H. Penfold, in memory of Josephine Penfold
Louise Tillinghast, in memory of her sister, Amelia C. Babcock
Minnie Haekett Trowbridge (6 Beds)
1915 A Friend, in memory of Sophia Kellogg Stebbins and Mary Tompkins Kimball
A Friend
Mrs. Jeremiah V. Meserole, in memory of her father-in-law, Abraham Meserole
Mrs. Jeremiah V. Meserole, in memory of her husband, Jeremiah Vanderbilt Meserole
Mrs. Jeremiah V. Meserole, in memory of her brother, Adolphus Clock
Mrs. Jeremiah V. Meserole, in memory of her parents, Alfred and Anna Maria Clock
1916 Emil C. Bondy, in memory of Margaret Carson Cowan
Central Presbyterian Church
Mr. and Mrs. James Petrie Chalmers, in memory of James Petrie Chalmers, Jr. "Chalmers Memorial Bed"
Robert A. Chambers, in memory of his father, Robert Chambers
Dunlevy Milbank, in memory of his mother, Ella Dunlevy Milbank
William D. Sloane (3 Beds)
1917 Emeline Y. Danforth, in memory of Mrs. William B. Jenkins
Harris Brisbane Dick, to be known as the "Harris Brisbane Dick Free Bed"
Sarah C. Miller
Albert Winter, in memory of Adaline Benson Winter
1918 Ida Leora Olmstead, to be known as "Leora McCammon Bed"
1919 Samuel Elliott
Elizabeth Keys, in memory of her daughter, Edith Keys

Rutgers Presbyterian Church
James R. Steers, in memory of his former wife, Rebecca E. Steers
John W. Sterling
1920 William C. Boschen, to be known as the "Boschen Bed"
Rosa Franklin (4 Beds)
Francis P. Furnald
Mrs. Francis P. Furnald
Mary A. Harriot, to be known as the "Margaret Harriot Alms"
Mary A. Harriot, to be known as the "James Harriot Alms"
Mrs. Henry O. Havemeyer, in memory of her parents, George William and Matilda Adelaide Elder
Margaret J. Orr, in memory of her mother, Ann Boyd Orr
Anna St. John, in memory of her brother, Milton St. John
1921 Mrs. Peter B. Wyckoff, to be known as the "Sidney Dillon Bed"
Henry M. Gescheidt
Ralph E. Prime, in memory of his daughter, Ruth Havens Prime
Joseph K. Gwynn
Charles S. Ward, in memory of his friend, Sophie L. Kinman
Charles S. Ward
1922 Minetta C. Howenstine (8 Beds)
Christina C. Munro, in memory of her husband, John Munro
Anna M. Romaine, in memory of Dr. William I. Detmold
Arnold Thayer (2 Beds)
Hamilton B. Tompkins, in memory of his wife and himself
1923 Lydia Augusta Brown
Josephine Newman Hall
1924 Bohemian Society "Lidumil"
Cordelia F. Turrell
Nannie Gyles Johnson (Children's Ward), in memory of her son, Shirley Everton Johnson
Mrs. William John Fitzgerald
1925 Christina Bond
In memory of Julia C. Skidmore
George Clarke
Elizabeth J. Hofer (2 Beds)
In memory of Catherine Parke and Horatio C. Kretchmar
Edward M. Morgan Memorial Association (4 Beds)
In memory of Edward M. Morgan
Jennette Robertson, to be known as "Helen C. Inslee Endowed Bed"
1926 Elizabeth Ellen Auchincloss, to be known as "E. E. Auchincloss, Jr. Bed"
Members of the New York Stock Exchange, to be known as the Seymour LeGrande Cromwell Memorial (2 Beds)
Edmund Penfold (2 Beds), in memory of Josephine Penfold and William Hall Penfold
Dr. M. Allen Starr, in memory of Allen Egbert Starr
John B. Trevor, in memory of Emily N. Trevor
West End Collegiate Church
George D. Widener
1927 Second Presbyterian Church in the City of New York
Ellen Mills Borne, in the Children's Ward, two beds to be known as "John E Borne Bed" and "Nellie M. Borne Bed"
Virginia Marquand Monroe, in the name of the Young Men's Christian Association
Mrs. Charles H. Senff, to be known as "Dr. George A. Tuttle Bed"
W. Frazer Gibson, in memory of his mother, Jeanette Frazer Gibson, to be known as "Jeanette Frazer Gibson Bed"
Augustus C. Gurnee, two beds in memory of his mother, Mary M. Gurnee
Eliza V. Nicholson
Mrs. Murray W. Dodge and Mrs. Franklin Lord, in memory of their mother, Mrs. Fordyce D. Barker (Single Ward Room)
Dunlevy Milbank (Single Ward Room)
F. Ethel Wickham, in memory of her father, William Hull Wickham, to be known as "William Hull Wickham Bed" (Single Ward Room)

Anna A. Johnston, in memory of her parents, William G. and Adriana C. Gardner
Anna A. Johnston, in memory of Lewis, Anna, Edward and Mary Johnston (Single Ward Room)
Broadway Presbyterian Church, to be known as the "Walter Duncan Buchanan Bed"
1928 North Presbyterian Church
In memory of McKevers Bayard Brown (Single Ward Room)
Caroline B. Sellew (4 Beds)
Red Cross Rooms for Nurses (3 Single Ward Rooms)
Robert W. deForest (Single Ward Room)
Henry W. deForest (Single Ward Room)
James R. Steers
Jane Livingston Armour, in memory of John A. Livingston
Jane Livingston Armour, in memory of Herman O. Armour
In memory of Meredith Howland Pyne
Stella C. and Roi C. Megrue (Single Ward Room)
Mrs. E. C. Wills, in memory of her mother, Mrs. J. F. Ackerman, and her sister, Mrs. W. Clarence Reed
1929 Caroline White, in memory of her sister, Eliza W. White
Elizabeth A. Hays, in memory of William and Charlotta Hays
1930 Mr. and Mrs. Ernest Trow Carter
The Presbyterian Church in the Town of Rye, N. Y.
Mrs. Arthur E. Lauderbach, in memory of her mother and father, Esther Hull Jackson and Peter A. H. Jackson
Mary L. Walker Peters, to be known as "The Charles Grenville Peters and Mary Walker Peters Free Bed"
Marie F. Coddington, to be known as "The Emilie Coddington Bed"
1931 Mrs. Clara Beales Obrig, in memory of Adolph Obrig and Clara Beales Obrig (Single Ward Room)
Alfred V. Meserole, in memory of his mother, Evelina A. Meserole
1932 In loving memory of Justine Adele Stafford (Mrs. W. F. Stafford) by her sister, Ida Evelina Bliss
1933 Mrs. John A. Hance and Mrs. Irene Louise Hance, in memory of James R. Jesup
1934 Ida Adams, in memory of her sister, Sadie E. and her brother, Robert F. Adams (Single Ward Room)
Josephine Leypoldt, in memory of her brothers, Louis and Frederick Leypoldt (2 Beds)
1935 Walter J. M. Donovan, in memory of his father, Timothy Donovan
1936 Elizabeth P. Hewes, to be known as "The Elizabeth P. Hewes Bed"
Dunlevy Milbank, in memory of his mother, Ella Dunlevy Milbank
Mary S. Thayer, to be known as "The Orlando Thayer Bed"
1937 Margaretta J. Gamble, to be known as "The Gamble Bed," in memory of her father and mother
Jeremiah Milbank, in memory of his father, the late Joseph Milbank
1938 Susetta L. Goss, to be known as "The Goss Bed," in memory of her parents, Rev. C. C. Goss and Theodosia C. Goss
Annie Miller, to be known as "The Mrs. Alexander Miller Memorial Bed," in memory of her mother, Mrs. Alexander Miller
Bertha H. Minturn, in memory of her most faithful and beloved nurse, Mary Humphries
Henry T. Sloane, to be known as "The Euphemia Sloane Coffin Bed," in memory of his sister Euphemia Sloane Coffin
1939 "In Memoriam"
Dunlevy Milbank, in memory of his mother, Ella Dunlevy Milbank
1940 George Gibbs, to be known as "The George Gibbs Bed"
1942 Mrs. Huntington McLane, to be known as the "Therese K. Thorne Bed," in memory of her mother
Cornelia Livingston Pell, in memory of Alfred Duane Pell
Frank Wallach, in memory of Ida May Wallach
1943 Stuart Duncan, to be known as "The Stuart Duncan Bed"
1944 Anonymous, to be known as "The Dr. William Darrach Bed"
John Fraser, in memory of his parents, Alexander and Elizabeth Fraser

1945 Robert W. Carle, in memory of his mother, to be known as the "Cornelia Willets Carle Bed" for general hospital use including harelip and cleft palate cases
1947 W. and J. Sloane
Frederick Sturges, Jr., Mrs. Mary Armit Sturges, Mrs. Catharine Armit Chapman and Frederick Sturges, III, in memory of Frederick Sturges
Walter S. Gifford, in memory of his son, Walter Sherman Gifford, Jr.
Ida L. Darling, known as the "Richards Memorial Bed"
John Sloane, in memory of his wife, Elsie Nicoll Sloane, to be known as the "Elsie Nicoll Sloane Bed"
Elisa Smith Mabon, in memory of her husband, James Brown Mabon
1948 Otto M. Eidlitz, to be known as the "Eidlitz Bed"
1949 Effie B. Shearman
1950 Isabel Shields Kemp, to be known as "Mary M. Shields and the Dr. Robert Coleman Kemp Free Bed"
1951 Gerrish Hill Milliken
1952 William Dzus, to be known as the "Ukrainian Institute of America, Inc. Bed"
1953 Estate of Charlotte C. Garretson, to be known as the "Charlotte Higbee Kelsey Bed"
W. Alton Jones Foundation, Inc., to be known as the "Nettie Marie Jones Bed"
1954 Estate of M. Samuel Stern to be known as the "M. Samuel Stern Memorial"

Memorial Endowed Beds for Research Purposes

1948 Mrs. William Barclay Parsons, in memory of her husband, William Barclay Parsons
Muriel Jane Rudinger Foundation, Inc., to be known as the "Muriel Jane Rudinger Bed"
1950 Charles E. Culpeper Foundation, Inc. (2 Beds)
1952 John F. Bush Memorial Bed
Estate of Selma Boyd, two beds each to be known as a "Boyd Bed"
Bruce Barton, in memory of his wife, to be known as the "Esther Randall Barton Memorial Bed"
1953 Herman Goldman Foundation, Inc.
W. Alton Jones Foundation, Inc., in memory of Mamie W. Marvin
1954 Mr. and Mrs. Charles P. Cooper, in memory of Mrs. Cooper's father, Doctor Charles Lathrop Parsons
John Shepard Parke Memorial Bed
Mr. and Mrs. Sidney J. Weinberg, in memory of their parents

Endowed Rooms

1903 Henry H. Rogers, known as "Room J"
1905 Mrs. Morris K. Jesup, to be known as the "Eliza DeWitt Memorial Room"
1910 Mrs. John Stewart Kennedy, in memory of her husband, to be known as the "J. S. K. Memorial Room"
1912 Peter Cumming, to be known as "Peter Cumming Memorial Room"
1926 Alumnae Association of the School of Nursing of The Presbyterian Hospital, to be known as the "Amabel G. Roberts Memorial Room"
1928 Mrs. William Sloane, to be known as "The William Sloane Room for Graduate Nurses"
1930 The Sarah A. Hard Taylor Memorial Fund, to be known as "The Sarah A. Hard Taylor Room"
1935 Mrs. Herbert Neal, in memory of her husband, James Norman Hill, deceased
1937 S. Augusta Mora, in memory of her husband, Frank Mora, and mother, Sarah Robson Van De Water

Babies Hospital

1892 The Cribside Committee, known as "Cradyl-Nyst"

1894 Miss Ellen James Evans
Mrs. Henry G. Trevor
1895 Mrs. Evan T. Walker
Mrs. Richard Arnold, in memory of Georgiana Arnold
1897 Mr. and Mrs. Charles M. Fry, known as the "Mr. and Mrs. Charles M. Fry Bed"
Mrs. George Kemp, "For the use and purposes of the Hospital"
1898 Mrs. Oliver G. Jennings, known as the "Brewster Bed"
1899 Mr. and Mrs. John Sherman Hoyt, in memory of John Sherman Hoyt, Jr.
1900 Mrs. Elizabeth Chamberlin Lockwood, in memory of Emily Beaver Chamberlin
1902 Mr. and Mrs. W. E. Dodge, in memory of Grace Osborn
Henry P. Wertheim, in memory of Clara W. Wertheim
1904 Mr. and Mrs. George Arents, in memory of George Arents Brown
Estate of Mrs. Charles Harvey Hartman
1905 Mrs. J. Henry Lane
Mrs. Daniel S. Lamont, known as the "Julia Lamont Bed"
1907 The Cribside Committee
1908 Arthur W. Butler, in memory of Elizabeth Marshall Butler
1910 Dr. and Mrs. L. Emmett Holt, in memory of Kenneth M. Holt
Edwin Clarence Moller, in memory of Peter Moller
1911 Emily A. Watson, in memory of Wheeler Watson
Mrs. Bradley Martin, in memory of David Bradley Martin
1912 In loving memory of J. Bradley Cumings, endowed by his friends. "Greater love hath no man than this, that a man lay down his life for his friends."—*St John 15:13*
1914 Mrs. Andrew Carnegie, in memory of Archibald Fraser Barrow
Mrs. Robert W. Todd, known as the "Mabel Todd Bed"
1916 Mr. and Mrs. John Chandler Moore, in memory of Edward de Bébian Moore
Mrs. John Hubbard, in memory of Margaret Fahnestock
Mrs. Clarence M. Hyde, known as the "Clara Mathewson Hyde Bed"
1917 Harris Brisbane Dick, known as the "Harris Brisbane Dick Free Bed"
Mrs. Edward S. Harkness, known as the "Thomas Stillman Taylor Bed"
Mr. and Mrs. Walter A. Hirsch, in memory of John Walter Hirsch
1919 Mr. and Mrs. Daniel Schnakenberg, in memory of their daughter, Anna Kate Bartlett
Mrs. John Jay Knox, in memory of John Jay Knox
Mrs. John Jay Knox, in memory of Dr. Reuel B. Kimball
1920 Mrs. Andrew Carnegie, "A thanks offering for Louise Carnegie Miller"
1921 The Estate of Jacob H. Schiff
1922 The Cribside Committee, in memory of Sarah Elizabeth Williams
Mr. and Mrs. Simon Guggenheim, in memory of their son, John S. Guggenheim
1923 Mr. and Mrs. Herman Armour Nichols, "In loving memory of Marie Louise Nichols"
1929 The Estate of Julia M. Stout
1930 Edith C. Thompson, in memory of her mother, Mrs. Grace H. Thompson
1934 West End Collegiate Church
1935 The Estate of Daniel Schnakenberg, in memory of his children, Daniel Schnakenberg, Jr., and Marie Schnakenberg
1936 The Estate of Carrie Guggenheim
1938 The Estate of Emily S. Hornblower, in memory of her stepdaughter, Susie Sanford Hornblower
1949 Dr. Frederic H. Bartlett, "Endowed in loving memory of Frederic H. Bartlett, M.D., 1872-1948, by his patients and other friends to commemorate his many years of faithful service in Babies Hospital"
1950 The Estate of Emelyn L. Coolidge, in memory of Marianna Wheeler and Emelyn L. Coolidge, M.D., to be known as "The Wheeler-Coolidge Bed"

Neurological Institute

1929 Red Cross Endowed Bed for Nurses
Rivington-Dwyer Endowed Room for Nurses
1943 Alice Dunning Starr, in memory of her husband, Allen Starr

Memorial Endowed Beds for Research Purposes

1952 Estate of John H. Bahrenburg, in memory of John H. Bahrenburg and Elizabeth Bahrenburg (thirteen beds)

New York Orthopaedic Dispensary and Hospital

1883 Miss C. B. Hicks, continued in perpetuity by Buchanan Winthrop
1886 Mrs. Elizabeth Milbank Anderson, four beds, in memory of J. Milbank Anderson
1891 Alfred Corning Clark, three beds
Edward Severin Clark, two beds, to be known as the "Edward Severin Clark Beds"
Mrs. Henry S. Winthrop
1893 Mrs. William D. Sloane, in memory of William Douglas Sloane, Jr.
James K. Gracie, in memory of Anna Bulloch Gracie
Miss Sarah B. Gibbs
1894 Mrs. Richard Tylden Auchmuty, two beds, in memory of Richard Tylden Auchmuty
James H. Jones
1896 Mrs. William Astor, in memory of Helen Roosevelt
Mrs. Evan T. Walker, in memory of John J. Walker
1897 Mrs. William D. Sloane, two beds, one bed in memory of Maria Louise Vanderbilt and one in memory of Emilie Vanderbilt Burden
1898 Mrs. Charles B. Alexander, for her daughter, named the "Harriet Alexander Bed"
1901 Mrs. N. A. Baldwin, in memory of Louise Suydam Duer
Mrs. Benjamin Brewster, in memory of Benjamin Brewster
Henry T. Sloane, Jessie and Emily Sloane, bed endowed by their father
Mrs. Marion Story, in memory of M. Furman Hunt
1902 James Henry Smith, two beds, in memory of George Smith
Miss Emily A. Watson, in memory of Mrs. Mary J. Walker
1904 Miss Cornelia Prime, in memory of her brother, Temple Prime
Miss Helen Phipps
James K. Gracie, in memory of Esther Gracie Ogden
1906 Miss Caroline White
Mrs. M. Dwight Collier, in memory of Maurice Dwight Collier
1908 Mrs. H. N. Munn, Mrs. Augusta Munn Tilney and Orson D. Munn in memory of Henry Norcross Munn
1911 Estate of Everetta C. Whitney
Miss Josephine C. Smith, in memory of her father, Dr. Edward A. Smith, and her mother, Rebecca Miller Smith
1913 Estate of Marion de Forest Clark, in memory of Julian Bouton Clark
An anonymous donor, to be known as "Mary Townsend Cuyler Bed"
Carolina F. Butterfield, in memory of Frederick Falconer Butterfield
1915 Miss Emily Trevor
Mrs. Frederick W. Vanderbilt to be known as "The Louise Bed"
George Grant Mason, two beds, in memory of his uncle, James Henry Smith
1916 Henry M. Tilford, in memory of Catharine Hunt Tilford
Estate of Miss Clementine Furniss, to be known as the "Clementine Furniss Bed"
An anonymous donor
1917 Mrs. Charles H. Senff, in memory of her little son, Henry Senff
Mrs. A. Murray Young, in memory of her great uncle, Wilson G. Hunt
1919 R. Fulton Cutting, to be known as the "Helen Suydam Cutting Bed"
Mrs. Frederick Delano Hitch
Levi P. Morton, in memory of Anna Livingston Morton
Miss Georgiana G. R. Wendel, two beds, "In Memory of My Sister, Augusta A. S. Wendel"
Various donors, in memory of Theodore Roosevelt
1920 Mrs. John Hobart Warren
1921 Mrs. Winthrop W. Aldrich, in memory of her little son, Winthrop Williams Aldrich, Jr.
F. Ambrose Clark, to be known as "The Florence L. Clark Bed"

1922 Mrs. David T. Dana, in memory of her mother, Mrs. M. Dwight Collier
1924 Estate of Charlotte Bruce Bickmore, in memory of Albert Smith Bickmore, Jr.
Mrs. Louise Ward McAllister Lewis, in memory of her mother
1925 Miss Elizabeth J. Hofer, two beds, in memory of Horatio C. Kretchmar
Percy Chubb, in memory of his wife
Junior Red Cross of the Public Schools of New York
Mrs. Douglas Robinson, in memory of her friend, Charles Allen Munn
1926 Junior Red Cross of the Public Schools of New York
1927 Darrach Home for Crippled Children, in memory of Dr. May Darrach
1928 Mrs. Mary L. Schoonmaker, ten beds, in memory of Sylvanus Lothrop Schoonmaker and Frank Layng Schoonmaker
Estate of Henry D. Dickinson, in memory of Hathaway M. Dickinson
1930 James T. and Sarah Bancroft Leavitt, to be known as the "Mrs. James T. Leavitt Bed"
1934 Henry C. deRham, Frederic F. deRham and Clarisse deRham Rutherfurd, in memory of their parents, Charles and Emily Howe deRham
1935 Mrs. Percy R. Pyne and family, in memory of Meredith Howland Pyne
1936 Miss Elizabeth Stewart Hamilton, in memory of Mrs. John Hobart Warren, to be known as the "Harriette Mott Warren Bed"
Mrs. Edward S. Harkness, to be known as "Dorcas House Bed" in dear memory of Wilma Gideon
1938 Miss Grace Howard Potter, to be known as the "Howard and Mary Louisa Potter Bed," in memory of her father and mother

Endowed Rooms

1922 Glenn Ford McKinney, a ward room in the country branch, in memory of his wife, Jean Webster McKinney
1929 400 of his friends and associates, a room in the private pavilion, in memory of H. Le Roy von Lackum, M.D., surgeon in this hospital, 1916-1928

Herman Knapp Memorial Eye Hospital

(Institute of Ophthalmology)

1883 Mrs. Oswald Ottendorfer
1884 Miss Henrietta A. Lenox
1895 Miss Mary Morris van den Heuval
1897 Mrs. Giovanni Ceccarini
1913 Miss Catherine A. Bliss
Miss D. Willis James
1918 Truman Peck Stone
1921 Miss Rosie Bernheimer (In memory of her parents)
1923 Miss Mary Wiley (In memory of her brother, George Wiley)
1928 Mrs. Matilda Townsend Palmer
1931 Leo Doblin
1936 Charles M. Brooks

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2. PRESBYTERIAN HOSPITAL
   N. Y. ORTHOPAEDIC HOSPITAL
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   SQUIER UROLOGICAL CLINIC
3. HARKNESS PAVILION
4. POWER HOUSE
5. COLLEGE OF PHYSICIANS AND SURGEONS
6. VANDERBILT CLINIC
   SCHOOL OF DENTAL AND ORAL SURGERY
7. N. Y. CITY DEPT. OF HEALTH
   SCHOOL OF PUBLIC HEALTH AND ADMINISTRATIVE MEDICINE
8. INSTITUTE OF OPHTHALMOLOGY
9. MAXWELL HALL
10. NEUROLOGICAL INSTITUTE
11. N. Y. STATE PSYCHIATRIC INSTITUTE & HOSPITAL
12. BARD HALL
13. HARKNESS MEMORIAL HALL
14. FRANCIS DELAFIELD HOSPITAL, N.Y.C.
15. PAULINE A. HARTFORD MEMORIAL CHAPEL

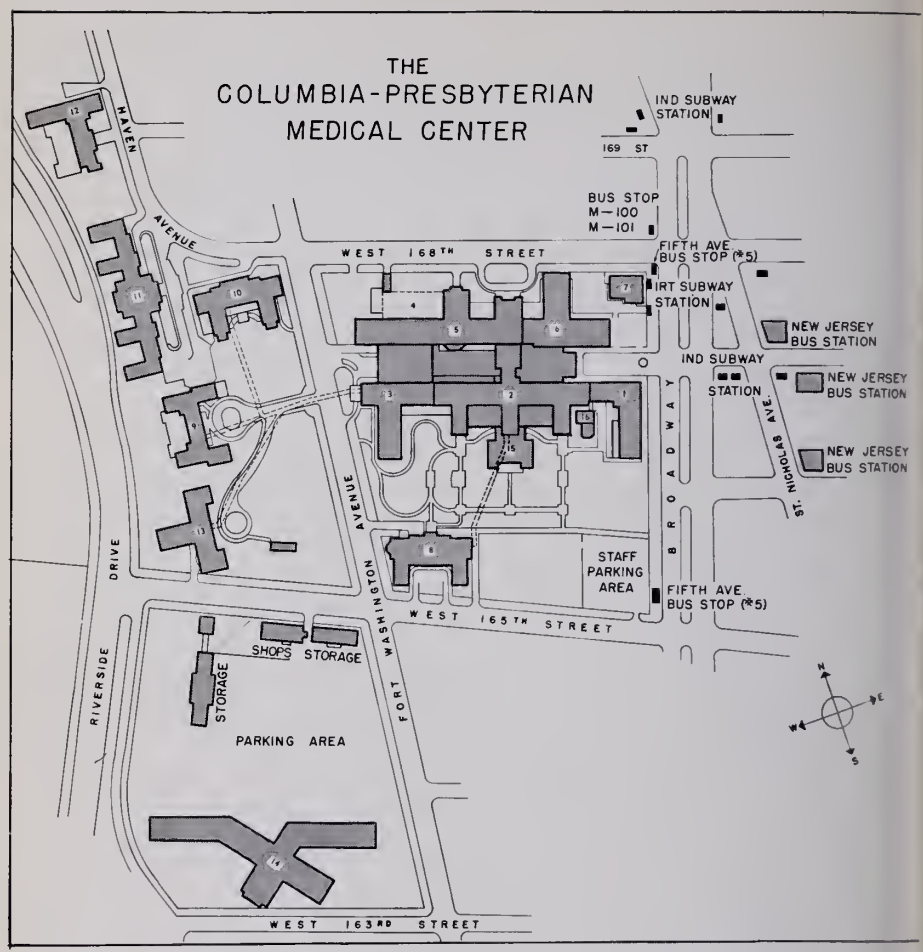


ANNUAL REPORT FOR 1955

The Presbyterian Hospital at Columbia-Presbyterian

MEDICAL CENTER





1. BABIES HOSPITAL
2. PRESBYTERIAN HOSPITAL
   N. Y. ORTHOPAEDIC HOSPITAL
   SLOANE HOSPITAL
   SQUIER UROLOGICAL CLINIC
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14. FRANCIS DELAFIELD HOSPITAL, N. Y. C.
15. THE PAULINE A. HARTFORD MEMORIAL CHAPEL
16. BETATRON BUILDING

MEDICAL CENTER

EIGHTY-SEVENTH ANNUAL REPORT

THE PRESBYTERIAN HOSPITAL
IN THE CITY OF NEW YORK

Including

BABIES HOSPITAL
HARKNESS PAVILION
INSTITUTE OF OPHTHALMOLOGY
MARY HARKNESS HOME
NEUROLOGICAL INSTITUTE
N. Y. ORTHOPAEDIC HOSPITAL
PRESBYTERIAN HOSPITAL
SLOANE HOSPITAL FOR WOMEN
SQUIER UROLOGICAL CLINIC
VANDERBILT CLINIC

BROADWAY AND 168th STREET
NEW YORK 32, N. Y.



For the Twelve Months ended December 31, 1955

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Origin and Functions of the Medical Center

The Medical Center comprises a group of long established hospitals of high standing which, in affiliation with the College of Physicians and Surgeons of Columbia University, furnish an integrated program to provide the highest quality of medical care for the sick and injured, to advance knowledge about the cause, prevention and treatment of disease and disability, and to train men and women in the professions of medicine, dentistry, nursing, public health, and allied fields. Through the affiliation between the hospitals and the University the members of the staffs of the hospitals are nominated by Columbia University, and teaching and research are conducted in all the hospitals.

A brief description of the origin and functions of each hospital unit of the Medical Center follows:

THE PRESBYTERIAN HOSPITAL

The Presbyterian Hospital, founded as a general hospital in 1868 by James Lenox, was originally located on the block bounded by Madison and Park Avenues between 70th and 71st Streets. On April 25, 1911, Presbyterian Hospital made its original arrangement with Columbia University's College of Physicians and Surgeons for coordinating the care of the sick with the educational and research program of the University. Now Presbyterian Hospital is the largest single unit of the Medical Center. The Hospital occupies a 22-story building in which are the wards of the Medical and Surgical Services, Obstetrical and Gynecological Service, Urological Service, Ear, Nose and Throat Service, Dermatological Service and the Orthopedic Surgery Service. To provide for personal contact between doctor and patient, the Hospital is divided into floor units of between 60 and 70 beds. Each unit is fully equipped and has a special staff of doctors, nurses, social workers and dietitians.

The Presbyterian Hospital in the City of New York is the corporate title for all the voluntary hospitals and clinics at The Columbia-Presbyterian Medical Center. The group consists of the following units:

BABIES HOSPITAL

Babies Hospital, 167th Street and Broadway, founded in 1887, provides for general medical and surgical care of infants and children up to their thirteenth birthday, and care for premature babies. The total capacity

of the Hospital is 192. One floor is devoted to the care of private and semi-private patients. Both outdoor and indoor playrooms are provided for convalescent children. Laboratories are operated for the routine and research work of the Hospital in pathology, microbiology and chemistry. An X-ray and fluoroscopic department is operated under the direction of the Hospital radiologist. An outpatient department is maintained in Vanderbilt Clinic by the visiting and house staff of the Hospital. In addition to the general medical and surgical clinics there are special clinics for children suffering from heart disease, tuberculosis, epilepsy, asthma and other diseases.

HARKNESS PAVILION

Harkness Pavilion, 180 Fort Washington Avenue, erected at the time of the establishment of the Medical Center, is available for the accommodation of 300 adult private patients of the attending staff.

THE MARY HARKNESS CONVALESCENT HOME

Mary Harkness Convalescent Home, King Street, Port Chester, N. Y., opened in 1937 to provide convalescent care for adults. The new Strong Memorial Wing was opened in 1952 to care for handicapped children whose families are unable to provide the convalescent care following poliomyelitis, orthopedic, medical and surgical procedures. In a beautiful country setting, facilities are available for the convalescent care of 35 adults and 22 children.

THE INSTITUTE OF OPHTHALMOLOGY

Institute of Ophthalmology, 635 West 165th Street, opened in 1933, has complete facilities for the medical and surgical treatment of adult and child patients with diseases of the eye. There are private, semi-private and ward facilities. The total bed capacity is 92. On January 1, 1940, the work of the Herman Knapp Memorial Eye Hospital was taken over by the Institute.

THE NEUROLOGICAL INSTITUTE

Neurological Institute, 168th Street and Fort Washington Avenue, one of the first nongovernmental hospitals in this country for the treatment of nervous diseases, was founded in 1909. It moved from East 67th Street to the Medical Center in 1929. Its affiliation with The Presbyterian Hospital has made possible a broad basic program of teaching and research in neurology and in the treatment of diseases of the nervous system and surgical conditions of the brain and nervous system. Facilities are provided for 197 beds, of which 110 are for ward patients.

NEW YORK ORTHOPAEDIC DISPENSARY AND HOSPITAL

The New York Orthopaedic Dispensary and Hospital opened its first dispensary in 1866 largely because of the interest taken in the care of the crippled by Theodore Roosevelt, father of the President of the same name. In succeeding years, the dispensary grew into a hospital with beds for ward and private patients. In 1911, the first Spine Fusion Operation for Potts Disease (tuberculosis of the spine) was performed by Dr. Russell A. Hibbs. This successful operation opened an entirely new era in the treatment of this disease. The Orthopaedic Dispensary and Hospital was located in its own buildings at 420 East 59th Street until December, 1950, when it moved to the Medical Center. On the 5th floor of the main building, 622 West 168th Street, facilities are available for the care and treatment of orthopedic conditions and fractures in children and adults.

THE SCHOOL OF NURSING

The School of Nursing was founded in 1892 for the training of nurses. Since 1935 its educational program has been under the supervision of the Department of Nursing of the Faculty of Medicine of the College of Physicians and Surgeons of Columbia University. A three-year course in nursing is conducted, and the degree of Bachelor of Science is offered by the University to those properly qualified.

THE SLOANE HOSPITAL FOR WOMEN

Sloane Hospital for Women was built at West 59th Street and Amsterdam Avenue and presented to Columbia University by Mr. and Mrs. William D. Sloane in 1886. It now occupies three floors of the Presbyterian Hospital building for ward and semi-private patients and one floor in Harkness Pavilion for private patients. There are 181 beds, of which 116 are ward beds. The deliveries in the Hospital totaled more than 3,900 in 1955.

THE J. BENTLEY SQUIER UROLOGICAL CLINIC

The J. Bentley Squier Urological Clinic occupies the 10th floor of the Presbyterian Hospital building and the 10th floor of Babies Hospital. There are 67 beds for the care of adults and 19 beds for children. There are laboratories fully equipped to do diagnostic, X-ray, bacteriological, pathological, fluoroscopic, and research work. This unit has two large, especially equipped, operating rooms. The urological outpatient department is in Vanderbilt Clinic.

VANDERBILT CLINIC

Vanderbilt Clinic, Broadway and 167th Street, presented to Columbia University by the Vanderbilt family in 1888, is the common outpatient

department and admitting service for all the wards of all the units of The Presbyterian Hospital. It is a fully equipped dispensary offering complete medical, surgical and specialty services. Eligibility to the Clinic is determined by the admitting physician and the clinic interviewer and is limited to those unable to afford a private physician. The Group Practice Clinic, organized in 1946, has proved a forward step in the diagnosis and treatment of patients.

OTHER PATIENT CARE INSTITUTIONS LOCATED AT THE MEDICAL CENTER ARE—

The New York State Psychiatric Institute and Hospital, a 168 bed hospital, built and maintained by the State of New York with provisions for the study and treatment of all types of psychiatric disorders.

The Francis Delafield Hospital, built and maintained by the City of New York, is a 300 bed hospital for the treatment and study of cancer.

The Washington Heights Health and Teaching Center built and maintained by the City of New York.

Report

OF THE PRESIDENT

Report of the President for 1955

Once again the Trustees express their appreciation to the many friends whose support has been so generous and so constant, and to the professional staff and personnel whose devoted services have helped to make this another noteworthy year in Presbyterian's history.

When Presbyterian Hospital and Columbia's College of Physicians and Surgeons were brought together in their present location, very largely through the generosity of Edward S. Harkness, the Carnegie and Rockefeller Foundations, and the General Education Board, the Columbia-Presbyterian Medical Center was established.

This was done almost 30 years ago, but the general idea had been pursued here even earlier. One illustration of this process of viewing the ills of the whole man and not just a part occurred in 1904. In that year the Hospital established a Social Service, thus recognizing the part that social and economic problems play in the health of men and women. This Service began with one individual and now employs some 50 social service workers. Though the rapid growth of health insurance has helped to alleviate many social problems, the multiple activities of the social worker have continued to grow in number and importance.

In 1915 and 1916 a Follow-Up Clinic was established for patients who had been hospitalized in the wards, and with it a Unit History System. The *unit* in medicine is the patient, and his record should be the story of his life, regardless of the nature of his illness. This principle of long-term observation, firmly established at Presbyterian Hospital 40 years ago, is now known as the "longitudinal study of disease."

Another advance came in 1921 when the concept of the Personality Panel was introduced. Here all the factors of personality, environment and individual constitution, including emotional status, become integral parts of the study of the patient. The effects of emotions and mental strains are sought and measured. For almost 20 years the clinical services have included a group of psychiatrists primarily interested in the inter-reaction between the brain and other organs, i.e., Psychosomatic Medicine.

The establishment of the Group Clinic concept in 1946 was another notable advance. Those among the 50,000 admitted annually to Vanderbilt Clinic who need it can receive immediately a complete appraisal, to

which the skills and experience of the entire professional staff contribute. The result has been improvement in the quality of patient care. Diagnosis is completed much more promptly and the number of patient visits reduced.

It goes without saying that those diseases which are responsible for the majority of human suffering are of great concern to the professional staff of the Medical Center. Among these, diseases of the heart have been the subject of extensive and intensive research. The cause of rheumatic fever was first established here and a program of prevention inaugurated, including the use of sulfa drugs and penicillin.

In 1937 a cardio-respiratory laboratory was established. It is illustrative of the Medical Center approach that a better understanding of the *functions* of the heart and lungs would lead to improved diagnosis and treatment of certain *diseases* of the heart and lungs.

Among the newest items of equipment to aid research is a portable, multi-purpose machine that can record such data as electrocardiograms, blood pressure in each chamber of the heart, as well as cardiac output. It uses cathode ray picture tubes to relay information to attending physicians, and has a built-in camera for photographing desired records. It can also be coupled with other devices for making simultaneous measurements of the efficiency of the lungs. The facilities of this laboratory are of value to all the Services.

In the field of cancer research and patient care, another item of equipment is the 24-million volt Betatron, brought into service in September. This machine is used for basic study in the effects of high voltage X-ray and for the treatment of deep-seated tumors and other conditions.

It is fundamental to the progress of the Medical Center that it must continuously renew, replace and readjust its facilities and services. Illustrating this, several important building projects were undertaken in 1955 to modernize facilities, including a ten bed metabolic ward and an eight bed dermatologic ward. In addition, an orthopedic ward and an otolaryngology ward were rebuilt as smaller units. The nursery on the ninth floor of the Harkness Pavilion was replaced by accommodations for ten beds for adult gynecological patients.

The residency training program here is of increasing importance in its contribution to patient care as well as to the postgraduate training of the residents in the practice of their chosen profession. These residents are young men and women who have completed many years of costly medical education and are now obtaining further knowledge and skills while serving in the Hospital. At a time of life when they assume family obliga-

tions many are able to continue their preparation only through the continued sacrifices of themselves and their parents or friends.

The fiscal health of Presbyterian Hospital is, of course, a primary concern. For the first eight years after the war, operating expenses increased an average of about $1,000,000 a year. In 1954 and last year this increase levelled off to $800,000. The operating deficit was $165,000 in 1955, compared with $97,000 in 1954.

Following is a summary of the Hospital's patient care statistics and financial results.

In 1955 The Presbyterian Hospital . . . .

provided	453,600	days of hospital care
for	36,700	in-patients
and clinic care for	54,600	out-patients
who made	415,100	clinic visits
this cost	$10,425,000	for salaries
and	7,085,000	for supplies, services and depreciation
totaling	$17,510,000	
we received	$12,265,000	from patients
	3,711,000	from endowment income and gifts
	1,369,000	from other services
totaling	$17,345,000	
the difference	$ 165,000	must be made up from general funds

The cost of charitable service given by the Hospital exceeded payments received by $3,800,000. This represents 44 per cent of the total operating costs of the wards and clinics and, of course, would not have been possible without endowment and gifts from friends. This statement of the need illustrates the importance of continued support.

Late in 1955 the Ford Foundation notified us that we are eligible to apply for a grant of $250,000. We are deeply grateful for this evidence of interest on the part of the Foundation, as well as for the continued interest and support of many other foundations, corporations and individuals.

With pride we report the election of John S. Burke, Jr., Fredrick M. Eaton, John A. Gifford, Augustus C. Long, Dorrance Sexton and Edwin L. Weisl to the Board of Trustees and of Frederick Sturges, Jr. as an Honorary Trustee.

We regretfully record the deaths of two of our Trustees, Mrs. Yale Kneeland and F. Vinton Lawrence, Jr. Mrs. Kneeland, a member of the Board of Trustees since January, 1939, served as Chairman of the Vanderbilt Clinic Auxiliary from 1921 until 1944, and was associated with the Hospital in various capacities for more than 40 years. Mr. Lawrence had served as a member of the Corporation since 1950 and as a member of the Board of Trustees since March, 1953.

During the year Cleo Frank Craig was elected a Vice-President of the Corporation.

Dr. James E. McCormack was appointed Assistant Vice-President for professional services to patients.

Miss Margaret Eliot, R.N., Director of Nursing Service, retired during the year. Her influence in the Medical Center is reflected in the high esteem in which she is held by all who know her.

Miss Eleanor Lee, R.N., a graduate of the Presbyterian Hospital School of Nursing, was appointed Director of Nursing for Presbyterian Hospital and Professor and Executive Officer of the Department of Nursing of the Faculty of Medicine of Columbia University.

Space does not permit the enumeration of all the individuals who contributed to our program, many of whom prefer to remain anonymous. However, gratitude is here expressed to the 205 public-spirited and generous women who serve with the various auxiliary groups associated with the Medical Center, and to the 760 volunteers who gave over 80,000 hours of free service. Many of them have been coming to Presbyterian Hospital for many years with a devoted interest and spirit which has been most welcome and most helpful.

The Pauline A. Hartford Memorial Chapel continues its important influence in the spiritual lives and welfare of our patients and the members of our own Hospital organization.

The Chaplaincy Service is under the supervision and direction of Chaplain Robert B. Reeves, Jr., assisted by Reverend William P. Reed, Rabbi Marvin J. Goldfine, and Reverend Hugh Hostetler, Associate Protestant Chaplain. In addition there are four assistant chaplains.

Thus far in this report the importance of the Medical Center approach has been emphasized, together with some highlights and the more important events of 1955, and with them a statement of our financial posi-

tion. What do all these add up to? For one thing, they total up to the fact that we were able to care for about 100,000 patients during the year. Such a number is so big as to become almost meaningless because of its very size. It is only when the statistics are reduced to one person, say, a little girl with brown eyes, that the significance becomes clear.

Her parents noticed that she was quite deaf. They came from a generation that believed the only thing to do with a child having such a handicap was to place her in a school for the deaf, even though it meant removing her from the family. They were prepared to do this, but were told by friends of the services available at Vanderbilt Clinic. They brought her in and the Medical Center went to work. Was there anything that surgery might cure? Were there contributory physical disabilities?

The tests began. The child was placed in a special room in the Clinic having walls two feet thick, probably the quietest room in New York City. There, under the guidance of trained experts, after many adjustments conditions were finally established under which the little girl could hear. This led to training under an instructor, and fitting the child with a hearing aid especially suited to her needs. So, instead of spending her student years in an institution, she is now free to romp and play with her friends and to keep pace normally in school.

Looking away again from the specific to the general, it is clear that we have ahead of us much history to be written, especially in attacking the chronic diseases. A great task and a great opportunity await the Medical Center. Our vision needs to be kept on an upward plane, never over-estimating one service or one requirement to the detriment of another; but looking at the whole unified Medical Center approach as one that has amply proved its validity and its need of enlarged support in the years to come. The Medical Center is and must be dynamic, always moving forward, its work of teaching, treating, researching never finished.

There are a number of specific needs at this moment, all of which would contribute to progress.

For construction and current operating expenses, funds are needed for:

A modern pediatric psychiatric clinic
Research laboratory quarters for the Pediatric Service
Alteration and improvement of facilities for Neurology and Neurosurgery, including modern X-ray and other facilities
A psychiatric unit
Modernization of the Urological Service
Improved facilities for the Doctors' Private Practice Offices
Housing for graduate nurses and residents

To insure continuing work in medical science, endowment is especially needed for:

The residency training programs
Vanderbilt Clinic
Babies Hospital
Neurological Institute
School of Nursing
Salaries of the full-time clinical professional staff
Memorial beds for research

The post-war years have brought many changes. A whole new era of economic adjustment has opened for hospitals with the growth of health insurance plans, but the future progress of medical science will always need substantial voluntary support. We are grateful for the encouragement and help of our friends as we move forward.

CHARLES P. COOPER,
President

March 1, 1956

Report
OF THE TREASURER

EXHIBIT A

THE PRESBYTERIAN HO

BALANCE SHEET,

ASSETS

	December 31 1955	1954
ENDOWMENT FUNDS ASSETS:		
Investments:		
Bonds and stocks (approximate market quotation value—1955, $74,336,878)	$56,209,001	$53,266,272
Mortgages receivable, etc.	524,592	555,783
Cash	222,506	118,198
Total endowment funds assets	$56,956,099	$53,940,253
PLANT ASSETS:		
Property and equipment at original cost (less accumulated depreciation — 1955, $12,078,307; 1954, $11,507,912)	$21,474,529	$21,658,076
Replacement Fund—Bonds and stocks (approximate market quotation value—1955, $1,989,835)	1,821,316	1,203,836
Total plant assets	$23,295,845	$22,861,912
CURRENT FUNDS ASSETS:		
Investments — Bonds, etc. (approximate market quotation value—1955, $2,105,818)	$ 2,132,843	$ 2,384,705
Cash	235,754	369,519
Accounts receivable (less reserve—1955, $210,281; 1954, $147,430)	1,555,349	1,482,177
Supplies and materials	312,353	295,638
Interest accrued and dividends receivable	414,596	375,717
Prepaid insurance, etc.	49,698	74,439
Total current funds assets	$ 4,700,593	$ 4,982,195
Total	$84,952,537	$81,784,360

EXHIBIT A

CITY OF NEW YORK

, 1955 AND 1954

FUNDS AND LIABILITIES

	December 31 1955	1954
ENDOWMENT FUNDS (Exhibits C and D)	$56,956,099	$53,940,253
PLANT FUNDS:		
Capital invested in property and equipment	$21,474,529	$21,658,076
Replacement funds:		
Buildings	642,230	490,000
Furniture, fixtures and equipment	1,179,086	713,836
Total plant funds	$23,295,845	$22,861,912
CURRENT FUNDS AND LIABILITIES:		
General fund (Exhibit C)	$ 2,565,668	$ 2,980,194
Special expendable funds (Exhibit C)	1,124,810	1,025,544
Undistributed income from investments	166,136	159,499
Accounts payable	371,211	277,458
Patients' credit balances	64,852	70,258
Accrued payroll and other expenses	407,916	469,242
Total current funds and liabilities	$ 4,700,593	$ 4,982,195
Total	$84,952,537	$81,784,360

EXHIBIT B

The Presbyterian Hospital in the City of New York

STATEMENT OF INCOME

For the Years Ended December 31, 1955 and 1954

	Year Ended December 31 1955	1954
OPERATING INCOME:		
Care of patients	$12,264,716	$11,773,986
Other services	1,368,429	1,345,244
Total	$13,633,145	$13,119,230
Transfer from special expendable funds (Exhibit C):		
For research	392,196	371,234
For other designated purposes	361,796	335,698
Total operating income	$14,387,137	$13,826,162
OPERATING EXPENSES:		
Administration	$ 210,664	$ 215,175
Assistant Secretary-Treasurer	134,690	130,944
Comptroller	316,511	304,697
Public Interest	83,710	76,842
Convalescent Home	216,438	204,147
Non-Professional Services:		
Buildings and Grounds	2,180,482	2,012,956
Food Service	2,244,958	2,195,664
Personnel and Protective	213,690	204,478
Other Non-Professional Services	582,710	556,361
Professional Services:		
Nursing	4,540,560	4,439,895
Professional Staff, Doctors' Offices & Research	2,259,211	2,106,684
Vanderbilt Clinic & Special Services	3,624,019	3,407,476
Provision for Depreciation:		
Buildings	261,100	258,800
Furniture, fixtures and equipment	641,100	622,000
Total operating expenses	$17,509,843	$16,736,119
NET OPERATING LOSS	$ 3,122,706	$ 2,909,957
OTHER INCOME FOR GENERAL PURPOSES:		
Investment income	$ 2,366,000	$ 2,207,619
Contributions	591,342	605,447
	$ 2,957,342	$ 2,813,066
NET LOSS (charged to general fund—Exhibit C)	$ 165,364	$ 96,891

NOTE—Certain 1954 items have been reclassified in the above statement for comparative purposes.

EXHIBIT C

The Presbyterian Hospital in the City of New York

SUMMARY OF FUND CHANGES

For the Years Ended December 31, 1955 and 1954

	Year Ended December 31 1955	1954
ENDOWMENT FUNDS		
Balance, January 1	$53,940,253	$52,927,544
Add:		
Legacies and contributions	$ 1,029,419	$ 186,793
Gain from disposal of investments	1,983,846	775,916
Transfers from special expendable funds	2,581	50,000
	$ 3,015,846	$ 1,012,709
Balance, December 31	$56,956,099	$53,940,253
GENERAL FUND		
Balance, January 1	$ 2,980,194	$ 3,311,515
Add:		
Unrestricted legacies	$ 77,823	$ 32,162
Gain from disposal of investments	435	2,028
	$ 78,258	$ 34,190
Total	$ 3,058,452	$ 3,345,705
Deduct:		
Net loss (Exhibit B)	$ 165,364	$ 96,891
Expenditures for property and equipment	327,420	268,620
	$ 492,784	$ 365,511
Balance, December 31	$ 2,565,668	$ 2,980,194
SPECIAL EXPENDABLE FUNDS		
Balance, January 1	$ 1,025,544	$ 832,497
Add:		
Legacies and contributions	$ 492,448	$ 685,195
Investment and other income	513,726	475,309
	$ 1,006,174	$ 1,160,504
Total	$ 2,031,718	$ 1,993,001
Deduct:		
Transfers to:		
Operating income (Exhibit B)	$ 753,992	$ 706,932
Endowment funds	2,581	50,000
Expenditures for property and equipment	59,428	136,531
Miscellaneous	90,907	73,994
	$ 906,908	$ 967,457
Balance, December 31	$ 1,124,810	$ 1,025,544

EXHIBIT D

The Presbyterian Hospital in the City of New York

ENDOWMENT FUNDS, DECEMBER 31, 1955

THE PRESBYTERIAN HOSPITAL:

Anonymous	$ 625,926
Anonymous—For Support of Residency Training	102,500
Arnstein, Daniel G.	65,000
Baker, Mrs. Frederick, Pathological Department	8,500
Briddon, C. K., Gold Medal	2,559
Brookman, Henry D.	50,000
Cary, Caroline Catherine	50,000
Coakley, Cornelius G., Trust	415,295
Colgate, Hannah, Memorial	60,794
Collins, Perry McDonough	548,999
Columbia University for Vanderbilt Clinic and Sloane Hospital	1,400,000
Cook, William W.	119,498
Cragin Fund	68,819
Davis, Isabel G.	813,999
Delano, Moreau	4,000
Department of Surgery Research	9,370
Dodge, The Cleveland H.	310,500
Dortic Memorial	99,024
Dows, Mrs. David	7,700
Dows, Margaret E.	5,360
Educational and Scientific Work	285,528
Eichner, Joseph Herman and Hannah, in Memory of	8,576
Eidlitz, Otto M.	415,272
Eidlitz, Robert J.	152,500
Endowed Bed	1,672,234
Endowed Bed—Research	181,374
Faulkner, The Edward Daniels, Memorial for the Study and Treatment of Arthritis	100,000
Fiske Fund	104,236
FitzGerald, Frederick H. and Josephine F.	141,363
Flagler, Alice Manderlick	250,142
Foote, Edwin Bancroft	175,949
Ford, George W. and Eliza Lawson	330,911
General Endowment	257,400
Goldschmidt, Henry Philip	5,000
Gondran, Sophie M. and Adolph L.	100,000
Griffith, Griffith W. and Mary Jones, Memorial	1,319,573
Haller, Maria L.	2,609
Harkness, Edward S.	6,188,794
Harkness, Edward S., Memorial	14,000,000
Harkness, Edward S., Research	500,000
Harkness, Mary Stillman, Memorial Endowment	250,000
Harkness, Mary Stillman, Memorial Research	50,000
Harkness, The Mary S., for Convalescent Care	1,003,045
Harkness, William Hale, Memorial	43,416
Hartford, The John A., Foundation	300,000
Hill, Marguerite S.	5,500
Institute of Ophthalmology, The	3,412,942

ENDOWMENT FUNDS, DECEMBER 31, 1955

The Presbyterian Hospital (*Continued*)

Jesup, Morris K. and Maria DeWitt	$ 100,000
Jones, David, Memorial	300,000
Jones, Margarette A.	166,255
Keller Memorial	500
Kennedy, John Stewart	1,828,703
Kinnicutt, The G. Herman, Flower	5,000
Knapp, The Herman, Memorial Eye Hospital Endowed Bed	60,375
MacMillin, Isabel, Memorial	1,285,563
Martin, Frederick Townsend	10,000
Maxwell, Anna C., Memorial Library	6,476
McCosh, Dr. Andrew J., Memorial	100,192
McCready, Jeanne Campbell	106,529
McGuire, Mary Madison	260,006
Medical Laboratory Development Endowment	35,000
Medical Scientific	317,226
Ottman, for Cancer Research	20,000
Quick, The Walter R.	15,060
Room "J" Trust	5,294
Sage, Dean, Memorial	28,253
Sage, Dean, Scholarship	7,000
Sage, Russell and Margaret Olivia, Memorial	878,188
School of Nursing	203,230
Sherry, The Bertha, Memorial	653,401
Sidman Trust	1,072
Sloane Hospital	783,257
Sloane Hospital Babies' Alumni	17,662
Sloane Hospital Research	25,000
Squier Clinic	113,636
Stilson, Ellen J. and Minnie	21,029
Stone, William Ridgley, Memorial	25,000
Surgical Fellowship	60,000
Terry, John T., in Memory of	40,767
Tod, J. Kennedy, Memorial	100,102
Tolfree, The Caroline O. and James E., Memorial	157,370
Valentine, Isaac E., Memorial	563,227
Van Norden, Kathryn L.	2,609
Vanderbilt Clinic	156,806
Weinman, Moses	5,360
Welles, Frances Swan	10,000
Westlake, Emory H. and Caroline B.	20,043
Wheeler, The Dr. John M., Memorial	73,791
Williams, William	342,658
	$44,935,847

ENDOWMENT FUNDS, DECEMBER 31, 1955

The Babies Hospital:		
Cleft Palate Cases	$ 1,000	
Cribside Social Service Committee	12,828	
Educational Therapy	1,000	
Eichner, Joseph Herman and Hannah, in Memory of	8,576	
Endowed Bed	32,411	
General Endowment	10,000	
Harkness, Edward S., Educational and Scientific	600,000	
Harkness, Edward S.	1,199,775	
Harknes, Mary Stillman, Memorial Endowment	250,000	
Kimball, Reuel B.	57,738	
Lambert, Dr. Charles I., Memorial	10,000	
Rathbone, R. Bleecker	15,000	
Rumson Fund	20,470	
Videre, Leontine, Foundation	9,976	
Wilcox, Herbert B., Memorial	2,000	
		2,230,774
Neurological Institute:		
Blair Memorial	$ 3,127	
Endowed Bed—Research	130,000	
Ogilvie, Clinton, Memorial	9,970	
		143,097
New York Orthopaedic Dispensary and Hospital:		
Bridgman, Statira	$ 2,500	
Endowed Bed	618,246	
Farrell, Dr. Benjamin P., in Memory of	7,431	
General Endowment	833,259	
Hibbs, Russell A., Memorial Library	36,068	
Hurst, The Thomas D. and Kate	5,000	
Kane, Annie C., Fellowship	1,000,000	
Rathbone, R. Bleecker	15,000	
Tower, Mary T., in Memory of	30,569	
Watson, Emily A.	2,502,256	
White, Emily Vanderbilt	20,000	
Willard, Mary Livingston	5,000	
		5,075,329
Gain from Disposal of Endowment Fund Investments since November 1, 1946		4,571,052
Total Endowment Funds		$56,956,099

ACCOUNTANTS' CERTIFICATE

The Presbyterian Hospital
in the City of New York:

We have examined the balance sheet and supporting schedule of endowment funds of The Presbyterian Hospital in the City of New York as of December 31, 1955 and the related statement of income and summary of fund changes for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying balance sheet and schedule of endowment funds and the statement of income and summary of fund changes present fairly the financial position of the Hospital at December 31, 1955 and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Haskins & Sells
Certified Public Accountants

New York
January 27, 1956.

REPORT OF THE AUDITING COMMITTEE

To the Board of Trustees of the Presbyterian Hospital
in the City of New York:

Pursuant to Article VII of the By-Laws of The Presbyterian Hospital in the City of New York, the undersigned Auditing Committee appointed by your Board has chosen, with your approval, the firm of Haskins & Sells, as independent certified public accountants, to make an examination of the books and accounts of The Presbyterian Hospital in the City of New York for the fiscal year 1955.

We submit herewith, after due consideration by this Committee, a certificate of Messrs. Haskins & Sells dated January 27, 1956 relating to the Corporation's balance sheet and schedule of endowment funds as of December 31, 1955 and related statement of income and summary of fund changes for the year then ended, as the results of a satisfactory examination of the said books and accounts. Your Committee recommends that the Certificate and financial statements be accepted and approved.

Thatcher M. Brown, Jr., *Chairman*
J. W. Hornor, *Vice-Chairman*
Edward L. Shea
Auditing Committee

New York
January 31, 1956.

EXHIBIT E

GROUP RETIREMENT PLAN ESTABLISHED BY THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

The retirement benefits provided by the Hospital under its Group Retirement Pl are partly provided by a Trust Fund established with the Guaranty Trust Company New York and partly insured by the Travelers Insurance Company. The amounts s aside for retirement benefit purposes, which are not part of the assets of the Hospita aggregated $3,956,223 at December 31, 1955. In accordance with the Hospital's unde taking under the Group Retirement Plan the amounts already set aside are sufficient t provide for all retirement benefits to which employees now retired and employees no eligible to retire at their own request are or would upon retirement be entitled und the Plan. In addition, they include provision for that portion of future retiremer benefits to employees not now eligible for retirement at their own request, which ha been funded through December 31, 1955 under the systematic program followed by th Hospital in financing such benefits.

Following is the Trustee's report for the year ended December 31, 1955 of th Retirement Fund Trust established by the Hospital:

Assets in Fund—January 1, 1955	$1,111,87
Payments to Fund	325,00
Net Income from Investments including Net Profit on Investments Disposed of	50,02
	$1,486,89
Disbursements for Retirement Benefits	78,28
Assets in Fund—December 31, 1955	$1,408,61

	*Book Value**
Consisting of:	
U. S. Government Obligations	$ 89,287
Industrial, Railroad and Public Utility Bonds	873,793
Preferred Stocks	101,039
Common Stocks	334,295
Cash	10,201
	$1,408,615

*The cash and approximate market value of the securities held as of December 31, 1955 totaled $1,603,938.

GUARANTY TRUST COMPANY OF NEW YORK,
Trustee

By WILLIAM F. LACKMAN
Vice President

Following is a summary of the Retirement Fund Trust and the Travelers Insurance Company reserves at December 31, 1955:

Retirement Fund Trust-Guaranty Trust Company of New York, Trustee	$1,408,615
Travelers Insurance Company Reserve for Annuities Purchased	2,547,608
Total	$3,956,223

Reports

OF SERVICES

Anesthesiology

EMANUEL M. PAPPER, M.D., Director

The Attending Staff of the Service was strengthened during 19[illegible] by the return from military service of Drs. Edgar C. Hanks and Frederic W. Hehre, Jr., and the appointment of Dr. Leonard Brand upon completic of his residency. Dr. Eleanor C. Nelson, however, resigned to join the sta of Children's Hospital in Philadelphia.

There were several changes in the organization of the Service d signed to improve patient care and the education of residents. The first c these was the assignment of Dr. Herman Schwartz to the Institute c Ophthalmology for a longer period than had been customary for h predecessors. This pattern of assignment had been successful in the Sloan Hospital for Women under the guidance of Dr. Virginia Apgar. The tea concept encourages continuity of practices and relationships between mem bers of the various surgical services. There are also disadvantages becaus it is difficult to provide satisfactory experience in these clinical fields fo the other members of the Attending Staff who desire it. Efforts are bein made, however, to reach a reasonable compromise between these conflict ing goals, giving the satisfactions of a variety of assignments and preserv ing many of the advantages of continuity.

CLINICAL PRACTICES

The clinical responsibility of the Service remains large. The numbe of anesthesias administered during the year was 19,818.

There have been discernible trends in clinical practice representing the logical application of newer knowledge. For example, advantage has been taken of the increasing utilization of precision instruments in the operat ing room to improve the clinical care of the anesthetized patient. This trend toward acquiring more quantitative information about an anesthetized pa tient is a healthy one for his care and will be encouraged further.

The previously-reported increased use of relaxants with the less potent gases continued. Many anesthesiology services here and abroad share this experience. There was also more frequent use of hypothermia to reduce the oxygen demand of the tissues for certain neurosurgical pro cedures and, occasionally, for cardiovascular operations. Improvement of techniques for assisting respiration involved trial and increasing employ ment of mechanical ventilators during general anesthesia. Much time and effort has gone into clinical trial of these mechanical ventilators and in

researches designed to provide better physiological control of respiration in the anesthetized patient. The clinical apparatus which appears to be the most satisfactory at present is the Jefferson ventilator, which has positive and negative phases for mechanical ventilation. Such machines are valuable tools of the experienced anesthesiologist and should provide safer and more efficient care for patients undergoing major surgical procedures, particularly in the chest.

Dr. Bernard R. Fink designed a new pharyngeal airway which appears to be satisfactory and is being marketed commercially.

With the cooperation of the Hospital Administration and particularly Dr. Joseph E. Snyder, the various operating room units in the Medical Center were provided with excellent defibrillators for the treatment of ventricular fibrillation, should that rare catastrophe occur.

Members of the Attending Staff presented 94 lectures or scientific papers during the year. Twenty-four papers were published or are in press. Drs. M. Jack Frumin and Lester C. Mark were honored by election to membership in the Association of University Anesthetists. Drs. Emanuel M. Papper, Duncan A. Holaday and Ernest Salanitre attended a symposium on hypothermia sponsored by the National Research Council in Washington. An important symposium on the myoneural junction was held under the auspices of Columbia University. The conferees at this symposium included most of the leading figures in anesthesiology in the United States, Canada and Great Britain together with preclinical scientists of prominence from here and abroad.

We were fortunate, as in the past, to have many distinguished visitors from this country and abroad, including many of the world's eminent teachers of anesthesiology.

Various members of the Attending Staff continued their activities in organizations concerned with the science and clinical practice of anesthesiology. These included membership on the Special Committee on Infant Mortality of the Medical Society of the County of New York (Drs. Apgar and Holaday); the Program Committee of the New York State Society of Anesthesiologists (Dr. Frumin); membership in the House of Delegates of the New York State Society of Anesthesiologists (Dr. Apgar); committee membership in the American Society of Anesthesiologists (Dr. Holaday); membership in the House of Delegates of the American Society of Anesthesiologists, chairman of a survey committee for the American Board of Anesthesiology, membership on the Advisory Committee to the Postgraduate Assembly, membership on the Subcommittee on Anesthesia of the National Research Council, Consultant in Anesthesiology to the First Army and the Third Naval District, membership of the Council of the Association of University Anesthetists, Trustee of the Wood Library Museum, Visiting

Professor to the Anaesthesiology Center in Copenhagen, and Visiting Lecturer before the Norwegian Society of Anaesthesiologists in Oslo (Dr. Papper).

RESEARCH PROJECTS

Dr. Holaday completed his studies on improved micromanometric methods for the determination of respiratory gases in blood and plasma. The whole blood method has an accuracy and reproducibility which is comparable to that of the Van Slyke method. He also completed his development of a micromanometric method for measuring respiratory gases in blood which contains volatile anesthetic agents. These volatile agents interfere with optimal reproducibility of the method, but suitable sensitivity for most studies of respiration appears to be obtainable. Dr. Holaday and Dr. Apgar completed their studies on the evaluation of gastric insufflation of oxygen of infants. These studies proved conclusively that this method is of no practical value and has considerable danger. Dr. Holaday in collaboration with Dr. Vance Lauderdale, Jr. and Dr. Nelson studied the effect of temperature on the dissociation of whole blood buffer anions. This study is important as a tool in making appropriate measurements for patients subjected to hypothermia for either neurosurgical or cardiovascular procedures. Dr. Holaday has worked for two years with Dr. John Gilroy of the Ohio Chemical Company on the development of a four phase, constant volume respirator. The respirator was constructed with sufficient flexibility to produce a wide variety of respiratory flows and pressures for patients during anesthesia. These pressures and gas flows can also be recorded. The instrument should prove valuable in obtaining information on the effects of artificial or assisted respiration on a variety of physiological functions, and in devising physiological methods of producing controlled or assisted breathing during inhalation anesthesia, particularly with open chest surgery. Dr. Holaday continued his studies with Dr. Mark and Dr. Robert Cecil Brown on a method for serial determination of cardiac output. This consists of a more precise refinement of the method of Powers employing the Stewart formula with a radioactive tracer. Dr. Holaday refined his pH meter in efforts to provide a continuous flow apparatus. Preliminary studies of this equipment are in progress. Dr. Holaday continued his work on hypothermia with Dr. Hubert Rosomoff who is currently at the Naval Medical Research Unit in Bethesda, Maryland. He assisted Drs. Alvan L. Barach and Gustav J. Beck of the Department of Medicine in their studies of the effects of chronic anoxia on the control or treatment of metastatic neoplastic disease.

Dr. Apgar continued her work in the field of obstetrical anesthesia and the physiology of the prenatal period. In collaboration with Drs. Holaday and Leonard Stanley James, Dr. Apgar undertook the study of various

problems of the newborn period, including mechanics of inflation of the lung, distribution of blood between the body of the infant and the placenta during delivery, temperature regulation of the newborn and treatment of atelectasis in the infant showing respiratory distress. Dr. Apgar also investigated improvement of X-ray methods for the newborn, in collaboration with Dr. William Silverman of the Pediatric Service. Studies planned for the future promise precise information, at present lacking, on cardio-circulatory dynamics and internal respiration in the normal newborn infant and in the newborn infant with diseases of respiration or the circulation.

Dr. Mark continued his studies of the intravenous anesthetics in collaboration with Drs. Bernard B. Brodie and John J. Burns of the National Heart Institute and Drs. Leonard Brand and Carolina Ines Campomanes of Anesthesiology. These workers showed that thiopental readily crosses the blood brain barrier, probably as a function of cerebral blood flow. The rate of passage of barbiturates into the brain seems related to their fat solubilities. Thiobarbiturates in general are more fat soluble than their oxygen analogues and enter the brain considerably more readily. Dr. Mark and his associates also studied Dolitrone which, with alleged analgesic, relaxant and hypnotic qualities, had been proposed as a substitute for thiopental. Their clinical studies failed to confirm earlier work elsewhere. Quantitative studies with Dolitrone suggested that the drug behaved similarly to thiopental in body tissues. This material is not more valuable than anesthetics already available. Dr. Mark and his colleagues, in collaboration with Dr. Joseph F. Artusio, Jr., the Director of Anesthesiology of the New York Hospital, also studied the relative thiopental requirements for given depths of anesthesia in fat and lean patients. Depth of anesthesia is controlled by a servo mechanism with electroencephalographic monitoring.

The Steroid Viadril (21-Hydroxypregnane-3,20-dione sodium hemisuccinate) is a compound of great interest because it is the first anesthetic agent in the steriod group to be used successfully in man. This may represent an important development in anesthesiology as a new group of compounds is available for study in this special field. The drug itself probably has no great clinical importance. At present, Dr. Mark and his associates are developing chemical methods for the quantitative analysis of Viadril. The knowledge of its physiological fate in the body may suggest the synthesis of appropriate anesthetics in this group for study and clinical trial in the future.

Dr. Frumin continued his studies of the automatic administration of anesthesia with nitrous oxide oxygen and succinylcholine. The apparatus which he and Mr. Arnold Lee constructed has been used more frequently for the management of clinical anesthesia. The method has been advanced further by devising a method for the automatic administration of succinyl-

choline. Dr. Frumin also conducted physiological studies in animals to determine the metabolic fate and route of destruction of succinylcholine. Preliminary evidence suggests that the liver is intimately involved in the transformation of this compound. Studies are in progress to measure the influence of this method of anesthesia on acid base balance of the blood and the behavior of respiratory gases.

Dr. Herman Schwartz concluded the first phase of his studies with Dr. L. Laszlo Schwartz on problems of face pain related to the temporomandibular joint. They developed special techniques of blocking "trigger" areas in the masseter and internal pterygoid muscles. Dr. Schwartz and Dr. Andrew deRoetth, Jr., of the Institute of Ophthalmology, conducted a study of the effects of succinycholine on intra-ocular pressure in normal patients and in those with glaucoma. Succinylcholine increased the intra-ocular pressure initially in normal eyes. The intra-ocular pressure returned to normal or below normal within three to five minutes even when succinylcholine was continued as a steady infusion. Several patients had cataract extractions without complication during thiopental nitrous oxide-oxygen anesthesia reinforced with a continuous succinylcholine infusion. In one patient of this group the intra-ocular tension was measured periodically on the unoperated eye. It remained at pre-anesthetic levels. Succinylcholine had a negligible effect on intra-ocular pressure in glaucoma even when the preliminary skeletal muscle fibrillation characteristic of depolarizing block occurred. The effect of atropine and scopolamine on patients with glaucoma was also investigated. Doses as large as one mgm. were given parenterally without rises in intra-ocular pressure. All the patients studied, however, had chronic or "wide angle" glaucoma. Studies are planned for the evaluation of these belladonna drugs in patients with acute glaucoma.

Dr. Hanks resumed his collection of data on patients who had cardiac arrest in The Presbyterian Hospital since January 1, 1947. This clinical experience is being analyzed. Dr. Hanks began a study, in collaboration with Dr. Holaday, on the evaluation of positive-negative ventilation in the relief and prophylaxis of acidosis during general anesthesia.

Dr. Fink continued his studies of laryngeal function. He described a new hypothesis for the mechanism of opening and closure of the larynx. With Drs. V. N. Epanchin and Milos Basek, of the Department of Otolaryngology, Dr. Fink demonstrated that the opening and closure of the glottis may result from coordinated activity among a considerable number of muscles rather than from action of a specific adductor or abductor muscle. The sternothyroid and thyrohyoid muscles appear to play principal parts in both activities. Dr. Fink, in collaboration with Dr. James Watson, Jr. of the Department of Roentgenology at the University of Rochester, discovered evidence to support the concept of a ball-valve closure of the larynx during

coughing and swallowing. Dr. Fink continued his interest in upper airway obstruction. As a result of radiographic studies, he developed an artificial oropharyngeal airway which has been introduced into clinical trial and appears to be of clinical help in correcting certain kinds of airway obstruction. Dr. Fink also studied the comparative anatomy of the primate larynx in dissections which were furnished through the kindness of Dr. Donald Carter of the American Museum of Natural History. He found that the structures necessary for ball-valve closure of the larynx consisted of a preepiglottic body and muscular ventricular folds. These occurred in anthropoid apes but not in monkeys. Dr. Fink also developed theories of laryngeal spasm which resulted in a new classification of obstructions at the larynx during clinical anesthesia. In addition, Dr. Fink continued his studies on the physiological and clinical significance of the accessory muscles of respiration by employing electromyographic observations of the appropriate muscles. He also attempted in preliminary fashion to relate the effects of anesthesia upon the brain with its effects on laryngeal muscular activity.

Dr. Herbert Rackow, assisted by Dr. Salanitre, completed his method for quantitative analysis of organic tissue acids by means of chromatography. The method promises much as a tool for investigation of metabolic activities in the anesthetized state.

Dr. Johannes Bartels continued his studies of induced hypotension with Arfonad. Most of this work suggests that induced hypotension is satisfactory to a considerable degree in the anesthetic management of the portacaval shunt and the resection of certain aortic aneurysms. The quantitative estimation of Arfonad in the blood has not progressed as satisfactorily as had been hoped.

Dr. Lauderdale conducted a clinical trial of a recently-developed "copper kettle" ether vaporizer. This apparatus appears to be excellent in many respects. Its especial advantages provide a readily controllable and predictable delivery of ether vapor. Dr. Lauderdale also plans to test several new local and topical anesthetic agents which have been collected over the years and appear to warrant clinical evaluation and trial.

Dr. Rita Jacobs continued her studies of peripheral venous pressures during anesthesia and operation. There have been too many changes in peripheral venous pressure to use this method as a reliable index of early blood loss of clinical significance. Studies related to measurement of central venous pressure should be more fruitful and it is hoped that these can be undertaken in the relatively near future. Dr. Jacobs also conducted a small study on premedication with Reserpine. Under the conditions of study no sedation was achieved preoperatively, even though the drug was given the night before surgery as well as one to two hours before the induction of anesthesia. Unexpectedly, excessive sedation was found postoperatively and

frequently was a source of interference with early convalescence. Reserpine was therefore considered unsuitable for preoperative sedation and its use discontinued. Dr. Jacobs also investigated a new topical anesthetic agent with a double blind testing method. The method of testing consisted of ascertaining the response of the larynx to corniculate cartilage irritation according to the method of Clark and Rovenstine. It was concluded that this agent is an effective one and that its onset of action is one to two minutes. Duration varied between 10 and 90 minutes, with a median of 40 minutes. No toxic manifestations were seen in a small number of patients studied. A major difficulty encountered with this compound is its relative deterioration when exposed to sunlight.

Dr. Norman Bergman concluded his study of the effects of anesthesia and operation on the patients with meningocele and spina bifida. A preliminary summary of these data was prepared.

In addition to his studies in the intravenous anesthetics, Dr. Brand is reviewing the cases of cystic fibrosis of the pancreas to determine, among other things, whether belladonna drugs used for blockade of secretions have any unusual or harmful effect on these patients.

FUTURE PLANS

Future development should be a logical extension of past growth or the correction of impediments to that growth. Laboratory space and equipment sorely require enlargement and improvement. The vitality and importance of this young and growing field in medicine need an appropriate workshop for research.

There is an increasing awareness that the skills developed in anesthesiology can be used with great profit to patient care in addition to operating room practices. Efforts toward making these skills available to other services in the Medical Center will be strengthened and enlarged.

Dermatology

CARL T. NELSON, M.D., Director

The most heartening accomplishment in 1955 from the standpoint of the Dermatological Service was the completion of an eight bed ward and treatment room unit in Presbyterian Hospital. These facilities were occupied early in 1956, and, for the first time since the establishment of the Medical Center, provided suitable integrated quarters for the treatment of patients hospitalized with dermatological diseases. The unit should also do much to aid clinical investigation, teaching, and the training of house staff and nurses in the care of the dermatological patient. Located on the eighth floor of Presbyterian Hospital, adjoining the wards of the Medical Service, the new facilities partly realize a project envisioned by the late Dr. J. Gardner Hopkins and the late Dr. A. Benson Cannon.

Another development which materially aided the care of hospitalized patients in 1955 was the assignment of a third resident to the Service. The three residency positions now authorized will enable the staff to render improved in-patient care and consultative services.

In the Dermatological Division of Vanderbilt Clinic the number of patient visits during 1955 totaled 37,066, an increase of 3,381 over 1954. Of these, 5,437 were new patients. Admissions to the Dermatological Service in Presbyterian Hosptial numbered 117, and 954 hospitalized patients were treated in consultation with other services. The Division of Mycology examined 3,287 specimens from patients admitted to the various clinics and services of the Medical Center, and the serological research laboratory of the Service carried out 1,612 treponemal immobilization tests. The further rise in the demand for these specialized examinations again emphasizes their increasing importance in the diagnosis and treatment of patients coming to the Medical Center.

It is with deep regret that we record the death of Dr. Elias Schneider, Assistant Dermatologist in Vanderbilt Clinic and Research Assistant in Psychiatry. Dr. Schneider, a psychiatrist who was particularly interested in the psychogenic aspects of chronic dermatoses, had been a member of the staff since 1946. He was a conscientious and able physician, highly respected by colleagues, students and patients. His loss will be felt greatly by his friends and associates.

The staff of the Dermatological Service undertook investigative studies covering a wide range of subjects during 1955. As in the past, many of the studies mentioned below utilized both the clinical facilities

of Presbyterian Hospital or Vanderbilt Clinic, and the laboratories of the College of Physicians and Surgeons.

Dr. George C. Andrews and Dr. Anthony N. Domonkos extended a long-time study of the efficacy of protective measures currently used in the treatment of dermatological patients with X-rays and radium. Dr. Andrews also continued an investigation of the biology of *Demodex*, a common parasite of seborrheic skin. Dr. Marvin Brodey and Dr. J. Lowry Miller began a long-term study of the medical significance of persistent biologic false positive reactions with standard serologic tests for syphilis. This study, which is dependent to a large extent on the availability of the specific treponemal immobilization test, already has indicated that biologic false positive reactions are not as innocuous as heretofore considered, and that they may be the forerunners of certain diseases which may become clinically apparent only after a prolonged period of time. Dr. Brodey, in collaboration with Dr. Carl T. Nelson, also completed a five-year follow-up study of patients with pemphigus who received long-term treatment with corticosteroids in Presbyterian Hospital.

Dr. Rhoda W. Benham, with Mrs. Christine Alexio and Mr. J. Dennis Pollack, extended the investigation of the serologic identity and animal pathogenicity of species of *Candida* isolated from man. The Mycology Division of Vanderbilt Clinic provided much of the material for this study. Dr. Helen Curth continued the clinical study of the relationship of acanthosis nigricans to visceral cancer. This investigation was carried out in collaboration with Dr. Madge P. Macklin and Dr. Bertha Aschner.

Dr. Domonkos initiated a study on neutron activation analysis of arsenic in normal skin, keratoses, and cutaneous epitheliomas. This investigation utilizes the facilities for neutron activation analysis at the Oak Ridge National Laboratory. It is designed to study the possible correlation between the arsenical content of the skin and the development of certain types of cutaneous epitheliomas and keratoses.

Dr. Beatrice M. Kesten, with Dr. Benham and Dr. Margarita Silva, extended the study of the relationship between the biologic characteristics of the dermatophyte, *T. rubrum*, and the type of clinical disease it produces. Special emphasis was placed on the familial incidence of infections with *T. rubrum*, a factor not generally recognized in the epidemiology of this disease. The laboratory phases of this investigation were initiated two years ago under the direction of Dr. Silva. The Mycology Division of Vanderbilt Clinic continued to be an invaluable source of clinical material for this work.

Dr. Miller, in collaboration with Dr. Meyer H. Slatkin and Dr. Justina H. Hill, completed an investigation of the pattern of treponemal immobilization reactions in the spinal fluid of patients with various forms of

syphilis of the central nervous system. The results of this study are now ready for publication. As mentioned above, Dr. Miller, with Dr. Brodey, also recently began an investigation of the ultimate medical significance of persistent biologic false positive reactions with standard serologic tests for syphilis. These studies on the various aspects of treponemal immobilization reactions utilize the facilities of the serological research laboratory of the Service.

Dr. Charles F. Post and Dr. John T. McCarthy initiated a study of the effects of pregnancy on the clinical course of various forms of lupus erythematosus. Dr. Leo Schweich and Dr. Harriet D. James are studying the possible therapeutic value of biotin in the treatment of various dermatoses of the seborrheic type. Dr. Victor M. Torres, with Mrs. Julia M. Einbinder and Dr. Nelson, completed a study of the relationship of hexosamine levels in the blood and skin of patients with psoriasis, and the degree of activity of this disease. Although the hexosamine levels observed in these patients bear some relationship to the extent and activity of the psoriasis, the association is not specific and is not sufficiently clear-cut to be of value in predicting exacerbations or measuring the severity of clinical involvement. As an extension of this work, Dr. Torres also studied the possible therapeutic value of 8-methoxypsoralen in psoriasis, but was unable to confirm any beneficial effect.

In the past year, members of the staff continued their customary active participation in the proceedings of various scientific and educational organizations. In several instances, well-deserved distinctions and honors came to members of the Dermatological Service. Dr. Andrews again was Chairman of the Panel on Cutaneous Malignancy at the annual meeting of the American Academy of Dermatology and Syphilology, and also was elected a member of the Committee on Education of that organization. Dr. Helen Curth and Dr. William Curth were invited to participate in the meeting of the Société Francaise de Dermatologie et de Syphiligraphie in Paris. Dr. Kesten again served as Secretary of the American Board of Dermatology and Syphilology, and Dr. Gerald F. Machacek was elected President of the New York Dermatological Society. Dr. Royal M. Montgomery spoke before the Jacksonville Dermatological Society in April, and Drs. Andrews, Domonkos, Paul Gross, Kesten, F. Philip Lowenfish, Machacek, Miller, and Nelson participated in the twenty-sixth series of the Postgraduate Radio Program of the New York Academy of Medicine. Eleven members of the staff lectured before various other scientific assemblies during the year and six participated in the symposia and postgraduate program of the American Academy of Dermatology and Syphilology. During 1955, 19 papers were published in scientific journals by members of the staff.

The annual alumni dinner for graduates of the Dermatological Serv-

ice of Presbyterian Hospital and Vanderbilt Clinic was again held in Chicago in conjunction with the meeting of the American Academy of Dermatology and Syphilology. Dr. John F. Daly of Burlington, Vermont, again served as Chairman of the Committee on Arrangements for this well-attended and increasingly popular function.

The sincere thanks of the Director and Staff of the Service are extended to the Board of Trustees of Presbyterian Hospital, to Mr. Alvin J. Binkert, Vice-President and General Manager, and to Dr. Robert F. Loeb, Director of Medical Service, for their kindly interest in and sympathetic approach to the needs of the Dermatological Service.

Medicine



ROBERT F. LOEB, M.D., Director

During the past year a series of important structural and functional changes took place in the Service. It is a pleasure to report that the students' clinical laboratories were completely reconstructed and modernized and now take care of the enlarged student body which worked under adverse circumstances in the past few years. The new eight-bed dermatology unit was opened on the eighth floor. It is currently housing the metabolism ward, thanks to the generous cooperation of Dr. Carl T. Nelson, pending the completion of the new metabolism ward which will occupy the east end of the ninth floor. This latter unit is close to the new and up-to-date diet kitchen for the preparation of weight trays for patients on "balance" studies. The consolidation of the metabolism unit, which will contain ten beds instead of twelve as in the past, will effect economies in the number of ward beds and the nursing staff formerly required. This arrangement will also mean a great saving of labor. The change in patients' toilets and bathing facilities on both medical floors is a most welcome improvement.

The cardio-respiratory laboratory on the stem of the seventh floor was enlarged, and new recording devices procured for use in this laboratory and in the operating rooms. With these changes the potentialities for integrated study of groups in pediatrics, surgery and medicine were greatly enhanced, not only for research but in the diagnosis of various forms of cardiovascular disease and in the appraisal of therapeutic efforts.

It is with the deepest regret that the unexpected death of Dr. Kenneth B. Turner on October 9 is reported. A member of the staff of the Medical Service since 1926 and Attending Physician to The Presbyterian Hospital at the time of his death, Dr. Turner had risen to a position of unusual distinction in American medicine. At the Medical Center he had won the deep devotion and admiration of his colleagues, students and patients. He was not only an outstanding physician, teacher and investigator, but had in addition a rare capacity for organization. This became apparent during his activities in the Office of Scientific Research and Development in World War II and continued in the later years when he established the Group Clinic, when he reorganized part of the teaching program in the Medical School, and also in his reports on the Nursing Service and on Social Service in the Hospital. In the year before his death he reorganized the electrocardiographic laboratory and the Cardiology Clinic. He effec-

tively brought together medical, surgical and pediatric groups interested in cardiological problems, always submerging his personal interests in favor of the interests and desires of others.

Dr. Michael Heidelberger, Chemist to The Presbyterian Hospital and Professor of Immunochemistry in the Department of Medicine of the Medical School, is on terminal leave, prior to his retirement in June, 1956. Dr. Heidelberger has won international recognition through his leadership in developing immunochemistry and bringing it to the dignified level of a quantitative science. He will be sorely missed not only for his continuing contributions to medical science, but because his qualities of gracious humility, unwavering integrity, solid critique, generosity to his fellow workers and unbounded enthusiasm for his science have served as a continuing inspiration to his associates at the Medical Center.

A number of members of the Service were lost to other institutions during the past year. Dr. Gilbert H. Mudge left to become Head of the Department of Pharmacology and Experimental Therapeutics at Johns Hopkins University. Dr. Irving M. London resigned to become Head of the Department of Medicine and Director of the Medical Service at the Albert Einstein School of Medicine. At year's end, Dr. I. H. Scheinberg left to become Associate Professor of Medicine at the Einstein School.

With the loss of staff in the past two years, the problems of recruitment of younger men and women of outstanding capacity to follow in the paths of those who have left constitute a challenge. Happily, in terms of financial help, the generosity of those good friends who contribute to the Daniel G. Arnstein Fund and the more recently established Alice Weisl Fund has not only made possible further support of young investigators, but has given great latitude to research interests by implementing the purchase of expensive equipment and even the provision of technical assistance. A bulwark of strength is assured by these gifts and that of Mr. William C. Potter, which are the more significant because they are not earmarked for categorical research and their disbursement is left to the discretion of senior members of the Medical Service long indoctrinated in the disciplines of medical science.

During the past year a number of distinctions came to members of the Service. Dr. Franklin M. Hanger was elected to the American Board of Internal Medicine; he became President of the Medical Board of The Presbyterian Hospital and was appointed to the Council of Columbia University. He was also elected to the Conseil Scientifique of the Revue Internationale d'Hépatologie. Dr. Helen M. Ranney was awarded the Joseph Mather Smith Prize of Columbia University for her studies on hemoglobin. Dr. John V. Taggart delivered the Morris Henry Nathanson Lectures at the University of Southern California. He addressed the Inter-

national Congress of Biochemistry in Brussels and the International Symposium on Enzymes in Detroit. Dr. Taggart also became a member of the Physiology Study Section of the Public Health Service (P.H.S.) of the U.S. Department of Health Education and Welfare. Dr. Karl Meyer lectured at the CIBA conference on bone in London, addressed the Pan-American Congress in Rio de Janeiro and Sao Paulo, and also lectured in Peru and this country. He was selected as a Harvey Society lecturer this year. Dr. Joseph W. Jailer was elected to the Royal Belgian Society for Obstetrics and Gynecology. Dr. Sidney C. Werner was appointed a member of the Endocrine Study Section of the P.H.S. He also delivered a series of lectures in various South American universities and was elected Honorary Member of the Argentine Medical Association, the Society of Endocrinology and Nutrition and of the Endocrine Society of Haiti. Dr. René Wégria lectured at the University of Brussels and at Boston University. Dr. Charles A. Ragan, Jr., completed his term as Chairman of the Metabolism and Nutrition Study Section of the P.H.S., became a member of the Training Committee of the Arthritis and Metabolism Institute of the P.H.S., and a member of the Executive and Scientific Committees of the Arthritis and Rheumatism Foundation. Dr. Ragan also gave numerous lectures throughout the United States. Dr. Alfred Gellhorn served as Chairman of the Study Section on Pharmacology and Experimental Therapeutics of the P.H.S. and as a member of the Editorial Advisory Board of Cancer Research. He is also Chairman of the Program Committee of the American Association for Cancer Research. Dr. George A. Perera delivered the Lewis A. Conner Memorial Lecture of the American Heart Association. He participated in a medical survey in the Middle East, and also served as Visiting Internist at the Delaware Hospital and at the Atlantic City Hospital. Dr. Stanley E. Bradley was appointed to the Publications Committee of the American Heart Association and delivered numerous lectures throughout the country, as have several other members of the staff. Dr. William B. Sherman was elected Chairman of the Section on Allergy of the New York State Medical Society and participated in the CIBA Symposium on recent advances in hypersensitivity. Dr. Charles A. Flood delivered two papers before the Argentinean Congress of Gastroenterology. Dr. Robert F. Loeb joined the Scientific Council of the New York City Public Health Research Institute and the Rutgers University Institute of Microbiology. He became a member of the Medical Visiting Committee of the Brookhaven National Laboratory and the Committee on Loyalty of the National Academy of Sciences and also the Advisory Committee for the Atoms for Peace Award.

As in other years the Service continued to bring large numbers of distinguished American and foreign scientists to participate in clinical con-

ferences. The Service offered opportunity for study to an unusually large and outstanding group of fellows from universities of distinction overseas, and fellows and trainees receiving stipends from agencies in the United States, including the John and Mary Markle Foundation, the P.H.S., the American Heart Association, the American Cancer Society, the Life Insurance Medical Research Fund, the National Foundation for Infantile Paralysis, the New York Heart Association, and others.

The research program, except for those studies in cadio-respiratory disease, as in the past, continued in the laboratories of the Medical School by the staff which serves both The Presbyterian Hospital and the Medical School. Thc salaries of the staff are paid by either one or both institutions and the support for research comes both from funds and grants received by the Hospital or the University. This interdigitation of effort is not only highly desirable but essential to the effective prosecution of the research programs here at the Center. A brief outline of the research activities of the past year follows.

On September 1 Dr. Alfred P. Fishman moved to the cardio-respiratory laboratory at The Presbyterian Hospital and a series of studies were initiated concerning the relationships between alveolar ventilation and pulmonary capillary perfusion in human subjects. Dr. Gerard M. Turino, Fellow of the National Foundation for Infantile Paralysis, Dr. A. Gregory Jameson, New York Heart Association Fellow, Dr. Edward H. Bergofsky, Fellow of the P.H.S., Dr. Martin Brandfonbrener, Trainee of the P.H.S., Dr. John A. Wood and Dr. Tor Richter participated. These research studies were supplemented by observations on a wide variety of patients with congenital and acquired heart disease. Dr. Perera continues his interest in hypertensive vascular disease. He extended his studies indicating that rauwolfia alkaloids may produce sodium retention, even in subjects without heart disease. In addition, he demonstrated that salt restriction is without significant effect on hypertension in patients with the accelerated phase of hypertension, despite associated marked dccreases in serum sodium concentration. He is investigating a piperazine derivative which may possess some antihypertcnsive action. Dr. William H. Hulet, a National Heart Institute trainee, is collaborating with Dr. Perera in preliminary studies involving serotonin in its effect on electrolyte metabolism.

Dr. Taggart continued studies on the conjugation of amino acids in kidney and relationship of this process to the active transport of p-aminohippurate. In addition, a more direct approach to the study of the nature of the transport mechanism has utilized p-aminohippurate labeled in the carboxyl group with 0^{18}. The demonstration that 0^{18} is not lost from the carboxyl group during transport in the dog suggests that the interaction of p-aminohippurate with the cellular carrier may bc ionic in type. Dr.

Richard J. Cross, in association with Dr. Taggart, has been utilizing chromatographic techniques to isolate the various nucleotides of the renal cortex. An attempt will be made to correlate changes in the amounts of these phosphorylated compounds with the ability of the kidney to transport substances against a concentration gradient. Dr. Cross continued his studies of aerobic phosphorylation by liver mitchondria. Utilizing radioactive phosphorus as a label, and paper chromatographic methods of isolating the compounds formed, it was possible to show that the inorganic phosphate of the mitochondria is present in at least two metabolicly separate pools. One pool equilibrates rapidly with the phosphate in the surrounding medium and probably serves as a precursor for the formation of phospho-enol-pyruvate, adenosine triphosphate and related compounds. The other pool equilibrates slowly and may be of little direct importance to the metabolism of the cell. The phosphate of both pools is released by the usual protein precipitants, and they react identically in chemical tests. It was usually assumed, therefore, that there is but one homogenous pool, and precursor studies based on this assumption have yielded misleading results.

Dr. Joseph C. Turner with Dr. Betty S. Roof carried out an investigation of the in vivo distribution of gentisic acid and showed that this drug has an affinity for connective tissue which may be related to its antirheumatic effect. Dr. Turner adapted paper electrophoresis to the study of drug interactions. Dr. Turner showed that the presence of white blood cells exerts a determining influence on the lysis of red cells by cobra venom. This may clarify certain of the puzzling aspects of the species' specific actions of venom and poses a new problem: the nature of the contribution of white cells to the hemolytic system.

Dr. Meyer continued the study of connective tissues, especially their mucopolysaccharide components. The structure of chondrosine, the repeating unit of chondroitin sulfate A and C, was established in collaboration with Dr. Eugene A. Davidson. Chondroitin sulfate B is under intensive study in collaboration with Dr. Philip Hoffman. It has been isolated from a variety of tissues, especially from skin. It appears to contain two distinct disaccharide units, one containing chondrosamine and glucoronic acid, and a second containing chondrosamine and an unknown uronic acid. With Drs. Alfred Linker and Hoffman, the enzymatic degradation of chondroitin sulfate A and C is being studied. In collaboration with Drs. Gabriel Godman, Henry D. Grossfeld and Charles A. L. Bassett of the Service of Orthopedic Surgery, the production of mucopolysaccharides in mass tissue culture is under investigation. A new project was initiated in collaboration with Mr. Ralph Heimer, involving the structure and enzymatic breakdown of sialoproteins, especially of a mucoid of the submaxillary gland.

Proteins of this type are of considerable biological interest since they combine with influenza and other viruses. A study of calcification was initiated in collaboration with Dr. B. E. C. Nordin from the Postgraduate Medical School of London. Another research fellow, Dr. Robert Milloing of the Department of Public Health from Johns Hopkins University, spent six months in Dr. Meyer's laboratory. Dr. Daniel L. Larson constructed a modified continuous flow filter paper electrophoresis apparatus and the optimal conditions for the use of this machine were investigated. Studies are in progress on the chemical characterization of C-reactive protein on the non-identity of protein molecules previously considered to be homogeneous. These studies may have bearing on certain problems in rheumatic fever. During the past year, studies of the genetic aspects of qualitatively different hemoglobins in inbred strains of mice were completed by Dr. Ranney. The biochemical differentiation of the varieties of hemoglobins in these mice is now being studied. This work is being carried on, as previously, in collaboration with Dr. Salome Gluecksohn-Waelsch, of the Department of Obstetrics. A study of erythrocyte production and iron metabolism in patients who have thalassemia major or minor was undertaken by Dr. Ranney.

During the past year, Dr. Bradley and his associates made studies of splanchnic and renal circulation, and the renal excretion of dextran. Dr. Alfred W. Childs and Dr. Burton Combes held fellowships awarded by the American Heart Association; Dr. Henry O. Wheeler, a fellowship of the Life Insurance Research Fund, and Dr. Owen L. Wade of the University of Birmingham, a visiting fellowship of the Rockefeller Foundation. In collaboration with Dr. André Cournand a study of the hemodynamic effects of hypoxia and exercise was made in patients at Bellevue Hospital on the Chest Service. The splanchnic circulation was unaffected by hypoxia induced by breathing low oxygen gas mixtures, whereas splanchnic blood flow (EHBF) and blood volume (SBV) were greatly reduced by exercise, indicating an important role of the splanchnic circulation in systemic hemodynamic adjustments. Dr. Wade recently reported the results of this study before the Medical Research Society in England. Further work on hepatocellular metabolic changes during exercise is projected. Dr. Combes continued to collect data, in collaboration with other members of the group, on the effect of the upright position on the splanchnic circulation before and after sympathectomy in patients with essential hypertension. Sympathectomy appears to interfere with the fall in SBV induced by orthostasis, suggesting that autonomic activity is necessary for active changes in splanchnic vascular capacity. This possibility is under investigation from a different approach in a cooperative study with Drs. Emanuel M. Papper and David V. Habif, of the Anesthesia and Surgical Services. Dr.

Wheeler continued his investigation of the circulation time across the splanchnic bed. He found that this bed may be separated in the dog into three units in terms of the distribution of circulation time: the hepatic arterial, splenic, and mesenteric. Dr. Wheeler reported his method and results at the annual meeting of the Association of American Physicians. Dr. Combes undertook an investigation of Rose Bengal excretion by the liver. This substance is cleared from the blood almost as rapidly as Bromsulfalein (BSP) and may also be used to measure EBHF. He found that BSP and Rose Bengal appear to compete for uptake in the liver and that dinitrophenol does not affect Rose Bengal extraction. Rose Bengal labeled with I^{131} is proving to be a useful tool in these studies. Dr. Childs broadened his studies of the distribution of nephron delay, and now has extensive data for normal human subjects and patients with renal insufficiency which indicate marked slowing in the movement of filtrate down diseased tubules, despite the great reduction in reabsorption of water and electrolytes. Dr. Childs was also successful in developing a method for the analysis of dextran concentration in blood and urine in terms of the contributions of fractions having different molecular weights. Simultaneous measurements of the clearances of dextran and plasma protein fractions in patients with proteinuria before and after assumption of the upright position showed that changes in filtration are not associated with changes in the pattern of loss of large molecules in the urine.

During the year, Dr. John H. Laragh continued studies of the hormonal factors regulating salt and water metabolism in normal subjects and in patients with edema. Work was completed, with the cooperation of Dr. H. B. van Dyke of the Department of Pharmacology, which demonstrates that progressive ascites can occur in animals with no demonstrable posterior pituitary function. In another study with Dr. Herbert C. Stoerk of the Merck Institute, Dr. Laragh demonstrated that aldosterone, the powerful salt-retaining adrenal hormone, is not stimulated by changes in serum sodium concentration, but, under control conditions in dogs, it was shown that the serum potassium is a powerful stimulus causing marked increases in the secretion of this new hormone. Further studies are now being carried out on dogs with diabetes insipidus in an effort to define further the mechanisms involved in the secretion of the aldosterone. Parallel studies of these animal experiments are being carried out on patients with congestive heart failure and cirrhosis. With Dr. Helen M. Anderson, a study is being conducted in normal dogs in an attempt to elucidate further the hyperkalemia which has been observed in sodium depleted subjects. The possible relationship of renal tubular potassium secretion to water reabsorption is also being studied in the diabetes insipidus dog. Drs. Anderson and Mudge continued their investigation of the intracellular relationships of potassium

and bicarbonate in rabbit tissue slices.

Dr. Marcel Goldenberg continued studies on the catechol amines. A bio-assay was developed for the determination of 3,4-hydroxy tyramine. It was shown with Dr. Bernt Hokfelt that injection of 3,4-dopa leads to a significant increase in the nor-epinephrine content of the adrenal medulla of the rat and these studies suggest it may be a nor-epinephrine precursor. In contrast, 2,5-dopa causes a decrease in the nor-epinephrine content of the medulla. Dr. Goldenberg is also differentiating certain types of hypertension on the basis of determination of the urinary excretion of nor-epinephrine and the excretion of biologically inactive catechols.

Dr. Abbie I. Knowlton and Dr. Emily N. Loeb, with Dr. Hokfelt, observed that the effect, in rats, of unilateral nephrectomy with partial arterial infarction of the remaining kidney can be greatly influenced by variations in dietary sodium. Universal and severe hypertension accompanied by nitrogen retention and histological evidence of widespread nephritis distinguished the rats maintained on a high sodium intake from the group in which this ion had been restricted where persistent hypertension was recorded in a minority; none showed significant nitrogen retention or nephritis. In collaboration with Dr. Stoerk of the Merck Institute, Dr. Knowlton and Dr. Loeb observed that a direct relationship obtains between the weight of the adrenal glomerulosa zone in rats and the serum potassium level over a wide range of variations in dietary sodium and potassium. Again, in conjunction with Dr. Stoerk, the study of the influence of adrenol steroids on the growth, blood pressure and serum electrolytes of the adrenalectomized rat was extended to include the newer analogues. Thus 9-alpha-fluorohydrocortisone in dosages of 1 mg. and above led to even more rapid weight loss than cortisone, elevation in serum and hypertension (although at the highest dosages explored this latter was an inconstant finding). Delta-1-cortisone exhibited less life-maintaining activity than cortisone, i.e., doses in excess of 0.5 mg. were necessary for survival in the absence of a sodium supplement. Weight loss far greater than that evoked by comparable doses of cortisone ensued but was not accompanied by significant hypertension. The addition of a salt supplement minimized this weight loss and permitted a modest degree of hypertension to become evident.

Dr. Werner, in collaboration with Dr. Maryloo Spooner, introduced a new and simple test for hyperthyroidism. The test is based upon his earlier finding that the administration of triiodothyronine does not affect radioiodine uptake by the thyroid in hyperthyroidism but causes a sharp reduction in the uptake of non-hyperthyroid individuals. Dr. Werner also characterized a group of euthyroid individuals with early eye signs of Graves' disease. He demonstrated that despite their normal basal metabolic level,

the thyroid responded the same to thyrotropin and triiodothyronine as the gland of patients with active hyperthyroidism. Studies upon a method for thyrotropin assay were undertaken in conjunction with Dr. Hans W. Neuberg and with Dr. George K. Smelser of the Department of Anatomy. Studies of the iodine compartments of the body continue in collaboration with Professors Howard Levene and Howard Levi of the Departments of Mathematical Statistics and of Mathematics at the University respectively. A comprehensive reference book on the thyroid gland, edited by Dr. Werner, was published during the year.

Dr. Jailer, in collaboration with a number of research fellows including Dr. Nicholas P. Christy, Dr. Donald Longson of the University of Manchester, Dr. Stanley Ulick, Dr. Eleanor Z. Wallace, Dr. Adele Dellenbaugh and Dr. Dorothy T. Kreiger, continued an active program in the laboratories of the Department of Obstetrics and Gynecology. Previous investigative work had suggested the possibility of an enzymatic block in the synthesis of hydrocortisone within the adrenals of patients with congenital adrenal virilism. It had been postulated that there was a piling up of some of the hydrocortisone precursors, which then escaped into the blood stream. In view of the findings of the certain urinary 17-ketosteroids and pregnane derivatives in the urine of such patients, it was thought that 17-hydroxyprogesterone and 21-desoxyhydrocortisone were the hydrocortisone precursors implicated. During the past year these two steroids were administered to patients with adrenal insufficiency and their urinary metabolites separated and identified. The C-19 steroids, which were obtained as a result of the administration of 17-hydroxyprogesterone, were etiocholanolone and androsterone, whereas the C-19 steroids obtained in the urine after the administration of 21-desoxyhydrocortisone were 11-hydroxyandrosterone, 11-keto-androsterone, 11-hydroxy-etiocholanolone, 11-keto-etiocholanolone. The C-21 steroids derived from 17-hydroxyprogesterone were 17-hydroxypregnanelone and pregnanelone, whereas the pregnane derivates from 21-desoxyhydrocortisone were found to be 11-keto-pregnanelone. In addition, the presence of pregnanediol, pregnanetriol and pregnanetriol-11-one were indicated but not positively identified with the methods used. These urinary metabolites present a pattern similar to those obtained in the urine of untreated patients with adrenal virilism, thus adding more evidence to the fact that the two administered steroids may be the precursors of hydrocortisone which are secreted in congenital adrenal virilism. It is postulated that in adrenal virilism there is an enzymatic block in the synthesis of hydrocortisone resulting in a temporary state of hypo-adrenalism, as far as hydrocortisone is involved. This causes the pituitary to secrete excessive amounts of ACTH, which results in the hypertrophy and hyperplasia of the gland. In order to achieve normal amounts

of hydrocortisone, however, there is an excessive production of the hydrocortisone precursors, 17-hydroxyprogesterone, and 21-desoxyhydrocortisone. These pile up, escape into the circulation and are metabolized to steroids, which are androgenic. These latter metabolites are responsible for the virilism which is characteristic of the disease. In the course of the above studies it was found that 17-hydroxyprogesterone can be metabolized to pregnanelone, and 21-desoxyhydrocortisone may be degraded to 11-ketopregnanelone; thus a new principle in steroid metabolism was shown, namely, the removal of the hydroxy group at the 17 position and the substitution of a hydrogen. This work was done in collaboration with Dr. Seymour Lieberman of the Obstetrical and Gynecological Department.

Tests in which 25 units of ACTH are infused intravenously over a four-hour period and plasma corticoids determined before and after the infusion were employed to evoke responses by the adrenal glands. This procedure was adequately tested in normal patients, Addisonian patients, hypopituitary patients, in congenital adrenal virilism, and in Cushing's syndrome. An unexpected result emerged, i.e., in patients with Cushing's syndrome due to bilateral adrenal hyperplasia, there is a hyper-responsiveness of the adrenal to a standard amount of ACTH. When the Cushing's syndrome results from adrenal tumor, this is not the case. The administration of prednisone in the dose range of 25-30 mg. a day for a period of seven days will depress the adrenal response to ACTH in normal individuals, but not in patients with Cushing's syndrome due to bilateral adrenal hyperplasia. This hyper-responsiveness is not due to a greater adrenal mass, since the removal of one of the adrenals does not significantly change the response in these patients. But it is modified by the removal of 90 per cent of the second gland. Patients with Cushing's syndrome with remission induced by pituitary irradiation respond normally to this ACTH test. This would indicate that the hyper-responsivness of the adrenal may be secondary to something in the pituitary. During the past year the adrenal function of two patients with Addison's disease, who were also pregnant, was studied in detail by Dr. Jailer and his associates. There is a steady rise in the urinary 17-ketosteroids during pregnancy, so that close to term the steroids are of normal value or even higher. But chromatographic separation and analysis of these steroids indicate the presence of large amounts of 20-ketosteroids, which react with the Zimmerman reagent, and are not the usual 17-ketosteroids. The urinary corticoids as determined by the Porter-Silber method also rise to levels which are characteristic of Cushing's syndrome. In such urine, however, small amounts of hydrocortisone, tetrahydrocortisone, tetrahydro-hydrocortisone are found. The plasma corticoids rise steadily during pregnancy so that at term they are well within normal limits.

The Faulkner Group continues its activities under the direction of Dr. Ragan. Dr. Baruch S. Blumberg, a fellow of the Arthritis and Rheumatism Foundation, carried out preliminary studies on the biophysical properties of connective tissue mucopolysaccharides which he is continuing at Oxford under Professor A. G. Ogston. He also completed a restrospective analysis of the group's experience with ankylosing spondylitis. Dr. Arthur I. Snyder, a second Foundation fellow, is continuing his detailed study of the processes of inflammation and repair. Dr. Wallace Epstein, also a Foundation fellow, is studying the serologic reactions in rheumatoid arthritis with the collaboration of Dr. Alan M. Johnson, a visiting fellow from Westminster Medical School of London. Dr. David S. Howell, a P.H.S. trainee, completed an analysis of the group's experience with long-term adrenal hormonal management of rheumatoid arthritis and is now organizing a rheumatic disease group at the University of Miami. The mechanisms of action of cortisone in inhibiting the processes of inflammation and repair are under study in vivo with Dr. Raffaele Lattes of the Department of Surgical Pathology and in vitro with Drs. Godman and Grossfeld of the histochemical laboratory of the Service of Orthopedic Surgery. The value of the delta-1 steroids in supplementing cortisone and hydrocortisone in clinical material was examined. A retrospective study of the group's experience with Still's Disease (Juvenile Rheumatoid Arthritis) is being conducted by Drs. Albert W. Grokoest, Felix E. Demartini and Snyder. It is a pleasure to welcome back as a member of Dr. Ragan's group Dr. Ronald W. Lamont-Havers, who was formerly a fellow at the Medical Center and has now returned to New York as Associate Medical Director of the Arthritis and Rheumatism Foundation.

The clinic organization remains unchanged with seminars for the fourth year medical students conducted weekly following the clinic session. Associations with the Columbia Research Division at Goldwater Memorial Hospital and the New York Orthopaedic Hospital remain close and highly profitable to the groups involved.

Two projects were pursued especially in the laboratory of Dr. Alfred Gellhorn. The correlative in vivo and tissue culture experiments on the chemotherapy of mouse and human brain tumors produced provocative results. The glioblastomas of mice and man are readily destroyed by low concentrations of atabrine in vitro. Attempts to translate these findings to practical therapeutics were not encouraging. Search for the explanation of the discrepancy led to the demonstration that an adequate concentration of the drug is attained in the tumor following administration, so that another reason must be sought. Circumstantial evidence was produced indicating that the acridine may be metabolized to a biologically less active form. The studies will be continued.

After two years of laboratory inquiry on the carcinogenic activity of tobacco tar, a conclusion has been reached. By appropriate combinations and permutations of the skin application of benzpyrene and tobacco tar, results were obtained which show convincingly that tobacco tar acts as a cocarcinogen. In the experiments, tobacco tar when used alone, failed to lead to squamous cell epitheliomas of the skin. In association with Drs. George A. Hyman, John E. Ultmann, Charles E. Crandall and Sedat N. Yorukoglu at the Francis Delafield Hospital, evaluations of chemotherapeutic agents in neoplastic disease were continued. In the past year the following four drugs were studied extensively: Thiotriethylenephosphoramide, 1,4-dimethanesulfonyloxybutane, p-butyric acid, benzyl bis-beta-chlorethylamine and prednisone. These clinical evaluations led to an indication of the place of these drugs in the drug therapy of the lymphomas and leukemias.

A number of studies were carried out under the direction of Dr. Alvan L. Barach. These included the following: (1) Extension of the use of the portable exsufflator. In collaboration with Dr. Gustav J. Beck and Dr. Louis A. Scarrone, optimal expiratory flow rates were established and extension of the use of the apparatus was made to postoperative subjects as well as to additional cases of poliomyelitis and bronchiectasis. In the latter disorder, surgical resection of the more severely involved lobe was made possible by previous employment of the exsufflator in cases previously too ill for surgery. (2) With the collaboration of Dr. Hylan A. Bickerman and Dr. Beck, a study of the use of prednisone was made in its use in 100 cases of bronchial asthma and pulmonary emphysema. It was found that this drug had noteworthy superiority to cortisone, especially in respect to its administration in cases with impairment of the circulation. (3) With the collaboration of Dr. Samuel Graff at the Francis Delafield Hospital, Dr. Bickerman and Dr. Beck, studies on inhibition of tumor growth in animals as a result of induced hypoxia were continued. In a patient with advanced metastatic carcinoma, acclimatization to 9.5% oxygen (equivalent to an 18,000 ft. altitude) took place in a period of 35 days without dyspnea at rest without definitive influence on the cancer.

Drs. Wégria, Hsueh-Hwa Wang and Vincent V. Glaviano continued their study of problems concerned with coronary circulation, cardiac work and metabolism. It was found that with auricular tachycardia of progressively increasing rates, cardiac work and efficiency decreased, whereas coronary blood flow and oxygen consumption increased. It was concluded that the cause of cardiac failure in tachycardia was probably not a relative insufficiency of coronary blood flow and/or available oxygen. Investigation of the mechanism of such cardiac failure is being continued. Preliminary experiments were also conducted on the effect of epinephrine,

nor-epinephrine and bile salts on coronary circulation, cardiac work efficiency and metabolism. Three medical students, F. Bruce Lewis, Nicholas A. Yankopoulos and Eugene R. Kelly, spent their elective period in the laboratory.

Dr. Kermit L. Pines, Dr. Hans W. Neuberg and Dr. Paul A. Marks are comparing vibration perception thresholds in diabetic and non-diabetic subjects in an attempt to substantiate the findings of Mirsky. Dr. Pines is also studying the effect of adrenal steroids and of sodium phytate on calcium metabolism in patients with sarcoidosis. With Dr. Ranney, he also made observations on the effects of calcium metabolism of massive doses of prednisone in patients with acute leukemia. Dr. Calvin H. Plimpton continued his studies of the effects of cortisone on calcium, sodium, potassium and nitrogen metabolism in rats. With Dr. Gellhorn and others, he studied errors in calcium metabolism in a group of patients with malignant disease but without osseous metastases.

Dr. Stuart W. Cosgriff extended his studies on anticoagulant therapy. He demonstrated the value of oral administration of small doses of vitamin K in the control of potential danger of hemorrhage in patients under treatment. He is also evaluating the value of ambulatory anticoagulant therapy in patients with arteriosclerotic heart disease who have developed embolic complications from intracardiac thrombi. It appears that indefinitely prolonged therapy in these subjects is not indicated, in contrast to the patients with rheumatic heart disease who had recurrent episodes of embolization.

Dr. Flood continues his studies on disordered motor functions of the esophagus and, with Dr. Michael J. Lepore and Dr. Leon Moses of the Psychiatric Service, is extending studies on chronic ulcerative colitis. Dr. Lepore continues his study of a variety of diseases in which steatorrhoea plays an important role. Dr. Henry Aranow, together with Dr. Paul F. A. Hoefer of the Neurological Service, is completing a clinical study of patients in the clinic for myasthenia gravis.

Neurological Surgery



J. LAWRENCE POOL, M.D., Director

The Service again witnessed an active year, marked by an unusual number of interesting and difficult cases. The cautious use of hypothermia for the surgery of certain intracranial vascular lesions was continued, thanks to the enthusiastic and efficient cooperation of the Service of Anesthesiology. In addition, stereotaxic techniques were used for the treatment of carefully selected cases of advanced intractable tremors. The Service of Radiology was of the greatest help in the application of this tchnique.

Plans for the Service of Neurological Surgery envisage more beds for pediatric neurosurgery and some relocation of space on the operating room floor.

Dr. J. Lawrence Pool, with Dr. Arthur A. Pava, Assistant Resident, completed the manuscript of a monograph on the early diagnosis and treatment of acoustic nerve tumors. He presented a report with Dr. James W. Correll on 25 patients with verified brain tumors who were treated initially as psychiatric problems, and another with Drs. Joseph Ransohoff, Correll and Arthur F. Battista, on long-term survival following radical surgery and X-ray treatment for glioblastoma multiforme. He gave a paper in London before the Second International Symposium of Neuropathologists on the treatment of the tentorial pressure cone. In March he gave a series of lectures on neurosurgical techniques in the West Indies. Dr. Pool is a Trustee of the American Museum of Natural History, a Scientific Director of the Yerkes Laboratories of Primate Biology, Orange Park, Florida, and a member of the Visiting Committee for the Psychological Laboratories of Harvard College.

Dr. John E. Scarff, Attending Neurological Surgeon, prepared a historical review entitled Fifty Years of Neurological Surgery, which was published in Surgery, Gynecology & Obstetrics in November.

Dr. Fritz Cramer, Associate Attending Neurological Surgeon, was active in a myelographic study of the cervical spinal cord and nerve roots in patients with cervical tumors and ruptured discs, with Dr. Frank Hudson, Assistant Resident. In addition he read papers at the Harvey Cushing Society on the surgical treatment of ependymomas of the cauda equina and also at the Symposium Neurologicum in London. With Dr. Hudson he presented a report at the Scandinavian Neurosurgical Society in Oslo on the occurrence of tumors of the cervical spinal cord concurrent with protrusions of intervertebral discs.

Dr. Edward B. Schlesinger, Attending Neurological Surgeon, carried out the following research projects: (1) localization of brain tumors with radioactive isotopes, in conjunction with Drs. Juan M. Taveras, Edith H. Quimby and H. H. Rossi: automatic scanning equipment measures uptake throughout symmetrical areas of the brain and records results; (2) attempts to correlate enzyme activity of meningiomas and their rate of growth, with Dr. Henry R. Liss, Assistant Resident; (3) a study of hydrocelic mechanisms in abnormal arteriovenous cerebral connections. At the Institute for the Crippled and Disabled, he is carrying out a study of pharmacological agents in dyskinesias and is preparing a film showing the effect of muscle relaxants on motor disorders. During the year he presented a lecture on spinal cord tumors and on cervical and lumbar disc syndromes at the University of Minnesota Graduate Program; he participated in a two-day teaching panel at the American College of Surgeons, Trauma Committee; and prepared a chapter on Cervical and Lumbar Areas for Dr. Harrison L. McLaughlin's Textbook on Trauma.

Dr. Lester A. Mount, Associate Attending Neurological Surgeon, carried out research on: (1) arteriographic studies of the collateral circulation of the brain; (2) spontaneous subarachnoid hemorrhage and intracranial aneurysms; and (3) a long-term study of the results of operative therapy for premature synostosis of the cranial sutures. He is President of the New York Society of Neurosurgery and Secretary of the Neurosurgical Society of America. He wrote a chapter on Vascular Anomalies in Children, to be published in a book on pediatric surgery, another chapter on Injuries of the Skull and Brain for Dr. McLaughlin's Textbook on Trauma, and, with Dr. Taveras, is publishing an article on the study of the collateral circulation of the brain following ligation of the internal carotid artery.

Dr. Ransohoff, Associate Attending Neurological Surgeon, was active in the following research projects: (1) experimental studies in the laboratory with Dr. Eli Goldensohn on the use of psychotogenic and related drugs on the brain; (2) psychosurgery with Dr. Pool, Dr. Paul Hoch and Dr. Murray Glusman at the New York Psychiatric Institute; (3) radioactive studies with Dr. Robert Fishman on the production of cerebrospinal fluid; (4) clinical evaluation of ventriculo-pleural anastomoses for the treatment of hydrocephalus; (5) studies and treatment of uncontrollable seizures in children and young adults regarding the surgical therapy of epilepsy, including hemispherectomies and cortical excisions, with Drs. Sidney Carter and Melvin Yahr. Dr. Ransohoff presented the following reports during the year: (1) observations of temporal lobe stimulations in psychosurgery made under local anesthesia, with Dr. Stanley Lesse and Dr. Hoch; (2) appearance of radio-iodinated serum albumin cerebrospinal fluid of hydrocephalus in infants, with Dr. Fishman; and (3) hydrocephalus in infants,

with Dr. Fishman. Throughout the year he gave lectures on various neurosurgical topics at the Medical Center and elsewhere.

Dr. Thomas J. Bridges, Jr., Associate Attending Neurological Surgeon, was active in the following research projects: (1) a study of cerebral circulation by a plethysmographic technique; (2) a study of the behavior of radioactive tracer substances following injection into the carotid circulation of patients with recurrent malignant brain tumor; and (3) lobotomy for relief of pain in terminal carcinoma patients. The following papers were read: Cerebral Vasodynamics, a Plethysmographic Technique, at the Harvey Cushing Society meeting; and Digital Vasomotor Changes Following Nerve Root Stimulation. Dr. Bridges is in charge of the Neurosurgical Service at the Francis Delafield Hospital.

Dr. James B. Campbell, Assistant Attending Neurological Surgeon, was active in the following projects in the neurosurgical laboratory: (1) investigation of the innervation of the musculature of the urinary tract; and (2) development of stereotaxic apparatus for the employment of radioactive isotopes in man afflicted with certain dyskinetic states. Among topics of papers read in 1955 were: (1) stereotaxic placement of radioactive isotopes in the brains of laboratory animals: a study oriented toward eventual use in man; (2) diastomatomyelia (bifid spinal cord): consideration of etiology, diagnosis and surgical treatment; (4) neurosurgical consideration of congenital anomalies of the neural axis, presented at the Yale University School of Medicine; (5) sacral neurotomy for production of bladder automaticity in paraplegia, presented at the Harvey Cushing Society. He also presented five papers dealing with his research on the innervation of the urinary tract.

Dr. Correll, Assistant Neurological Surgeon, was engaged in the following research projects: (1) the study of peripheral neuritides, with Dr. Howard Tucker, for which a clinic was organized; (2) an evaluation of endocrinological changes on experimental brain tumors in animals, with Dr. Pool; (3) means of improving the surgical treatment of glioblastoma multiforme, with Drs. Pool, Ransohoff, and Battista; (4) a study of the effect of hypophysectomy on patients with glioblastoma multiforme; (5) a study of the occurrence of brain tumors in patients initially treated as psychiatric problems with the object of defining means for arriving at an earlier diagnosis; and (6) experimental studies demonstrating an influence of the nervous system on lipid metabolism in experimental animals.

Dr. Dominick P. Purpura, Research Fellow, was active in our laboratory during the year. The acquisition of additional laboratory facilities permitted the realization of a long-range program of basic research in the allied field of experimental neuro-physiology. The following projects were investigated and reported upon: (1) electrophysiological studies on the mech-

anism of action of the psychotogenic agent, Lysergic Acid Diethylamide (LSD), consisting of an analysis of the effect of LSD on specific and non-specific afferent systems in the cat; (2) studies on the cortical mechanism of E.E.G. activation accompanying behavioral arousal; (3) neurohumoral factors associated with reticulo-cortical activity. Currently under investigation are the following: (1) neuro-pharmacology of Serotonin and Serotonin-LSD interactions; (2) nature of the neurohumor liberated by stimulation of the bulbar reticular system; and (3) facilitatory interaction of reticular stimulation and experimental convulsants. Most of the above studies were specifically designed to clarify the important role of dendritic activity in E.E.G. phenomena observed in paroxysmal and LSD-induced experimental states, and are aimed ultimately at a better understanding of mental illness and its therapy.

During the year a great many papers were published and reports presented by members of the Service at a variety of meetings here and abroad.

Neurology

H. HOUSTON MERRITT, M.D., Director

The activities of the Service reached a new peak in 1955. More patients were treated in the wards and private services than in any previous year. This large number of patients increased the burden on the radiological facilities as well as on the diagnostic laboratories at the Neurological Institute. The Planning Committee of the Medical Board and the Board of Trustees of the Hospital are studying means to improve the situation. Among the pressing needs are expansion of the radiological facilities and the establishment of a small unit for the care of private psychiatric patients. Plans which were discussed to relieve the present conditions include: the installation of more efficient elevators; transferring the radiological service from the tenth and eleventh floors to larger quarters on the eighth floor; the removal of the house officers' quarters from the twelfth floor to provide a unit of twelve beds for private psychiatric patients; and the improvement of space for the food services on the ground floor.

Plans are also being made to transfer children from the small ward on the third floor of the Neurological Institute to the wards in Babies Hospital. This will insure more efficient nursing and medical care of these little patients and will improve the educational opportunities for students and house officers.

For several years there has been a great need for neurologists trained for teaching and research. The Neurological Service is doing its part to meet this need. Practically all the graduates of our Service in recent years have been called to important positions in hospitals or universities throughout North America. After completion of their training in 1955, members of our house staff accepted these clinical and teaching appointments: Dr. Charles Poser, Instructor in Neurology at the University of Kansas; Dr. T. R. Johns, Assistant Professor of Neurology at the University of Virginia; Dr. Joseph Marotta, Instructor in Neurology at the University of Ontario; and Dr. Stanley Ball, Instructor in Neurology at the Albany Medical College. Fellows of the Public Health Service or other educational foundations who received training in clinical neurology or in research techniques during the past year included: Dr. Eugene W. Loeser, Jr., Dr. Niels L. Low, Dr. Fred Walberg, Dr. Richard J. Allen and Dr. Patrick F. Bray.

Research projects conducted by attending and house staff members included: a study of encephalitis accompanying infectious mononucleosis by Drs. Faith C. Walsh, Poser and Sidney Carter; cerebral angiography in

children by Dr. Poser and Dr. Juan Taveras of the Radiology Service; hydrancephaly by Drs. Poser, Walsh and Labe Scheinberg; pseudohypoparathyroidism by Dr. Boy Frame and Dr. Carter; recurrent polyneuritis by Dr. James Austin; and, cerebral tuberculomas by Drs. William Sibley and Joseph O'Brien.

The electroencephalographic laboratories at the Neurological Institute, under Drs. Paul F. A. Hoefer and Eli Goldensohn, continued to carry a heavy load of routine testing in electroencephalography and electromyography, and afforded the residents instruction in clinical electrophysiology. The research projects in the electrophysiological laboratories included: a report on the diagnostic significance of electroencephalographic recording during sleep in 600 patients by Drs. Hoefer, Goldensohn and Lutz Rosenkoetter; clinical electroencephalographic findings in migraine by Drs. Hoefer and Scheinberg; clinical and electroencephalographic review of periodic abnormalities in cases of encephalitis and myoclonus epilepsy by Drs. Hoefer, Stanley Lesse and Austin; review of clinical and electroencephalographic correlation in 1500 cases of verified brain tumor by Dr. Hoefer, Dr. Goldensohn and Miss Molly Cox; a study of cortical cell discharges in the cat at rest and in response to seizure stimulation by Dr. Sidney Cohen; the effects of hallucinogenic drugs on various aspects of brain physiology by Drs. Goldensohn and Stanley Ball; the central nervous control of respiratory activity from various mid-brain and diencephalic as well as cortical structures by Dr. Goldensohn and Dr. E. Gardner Jacobs; electroencephalographic changes in hypothermia by Dr. Goldensohn.

A report on 39 fatal cases of myasthenia gravis was completed by Drs. Lewis P. Rowland, Hoefer and H. Houston Merritt, and Dr. Henry Aranow, Jr., of the Medical Service. Drs. Aranow and Hoefer are preparing a special report on the effects of alkylphosphate anticholinesterases, especially Octamethylphosphoramide, in the treatment of myasthenia gravis. Drs. Hoefer, Aranow and Rowland prepared a report on the coincidence of myasthenia gravis and convulsive disorders.

Drs. Carter, Daniel Sciarra and Melvin D. Yahr continue their studies of anticonvulsant drugs in the Adult Epilepsy Clinic. Dr. Carter served as the Neurological Consultant to the Cerebral Palsy Clinic in Albany, New York.

Dr. Robert A. Fishman is studying the formation of cerebrospinal fluid using radioisotopes. Dr. Fishman, with Dr. Joseph Ransohoff of the Neurosurgical Service, demonstrated that protein enters the lumbar cerebrospinal fluid in larger quantities than in the ventricular fluid.

The Clinic for Children with Convulsive Disorders continued to care for a large number of children with epilepsy. The New York State and City Health Departments recognized the value of this clinic as a treatment and

training center by establishing a contract with the Hospital, whereby the Hospital should be reimbursed for the care of certain of these patients.

Dr. William F. Caveness, in collaboration with Drs. Jean Davis, James Watson, Zira DeFries and Melvin Robbins, continued the study of convulsive phenomena in childhood and the effects of chemotherapy and psychotherapy on the clinical manifestations. Dr. Caveness is also conducting a clinical and electroencephalographic study of veterans of the Korean war with traumatic injuries to the brain.

Dr. Lewis J. Doshay continues his work in the special clinic for the treatment of patients with paralysis agitans, with particular emphasis on the testing of new modes of medical therapy. Dr. Doshay is collaborating with Dr. Frederic Agate, Jr., of the Department of Anatomy in the Medical School, on a study of the effects of various medications on muscular tone and tremor.

The laboratory of immunochemistry at the Neurological Institute under Dr. Elvin A. Kabat continued studies on the structural basis for the unique biological activity of the Blood Group A, B, and O substances. Dr. Kabat and Dr. Sidney Leskowitz showed that the dialyzable oligosaccharide fraction from mild acid hydrolysis of hog blood group A substance can inhibit precipitation of anti-A by A substance while a similar material from hog O substance had no effect. Of the constituent monosaccharides present in the blood group substances only N-acetylgalactosamine was capable of inhibiting precipitation of A-anti-A and only galactose could inhibit precipitation of the B-anti-B system. Further studies indicated that N-acetyl-galactosamine is probably the terminal non-reducing sugar at the end of an A specific oligosaccharide side chain and that the structural unit at the non-reducing end of the B specific oligosaccharide side chain is galactosido 1→6 l-N-acetylglucosamine. Dr. Mary Carsten and Dr. Kabat continued their studies on the amino acid composition of the hog A and O substances. Data so far indicates that the amino acids are probably unrelated to the specific blood group activity. Mr. Peter Z. Allen, a graduate student in microbiology, and Dr. Kabat are studying the specificity of the non-dialyzable material remaining after mild acid hydrolysis of the blood group substances.

Purified anti-dextran was obtained by Dr. Kabat and Dr. Carsten who treated washed dextran anti-dextran precipitates with the enzyme dextranase. The enzyme splits the dextran with the release of the antibody into solution. Dr. Kabat spent two weeks at the Biochemistry and Virus Laboratory at the University of California at Berkeley, working with Dr. Howard K. Schachman studying the ultracentrifugal and electrophoretic properties of the purified antibody. He also attempted to study the interaction of the purified antibody with a hexasaccharide, isomaltohexatose, which was pre-

pared by Drs. J. R. Turvey and W. J. Whelan at the University of North Wales.

Miss Ada E. Bezer and Dr. Kabat are carrying out a study to determine the lowest molecular weight of dextran which is antigenic in humans. A series of dextran fractions of varying but known molecular weights were prepared for the National Research Council by Commercial Solvents Corporation and these fractions are being used for this study. This work is of importance for the use of dextran as a plasma expander.

Dr. Kabat served as a member of the Panel on Plasma of the National Research Council, the Executive Committee and Medical Advisory Board of the National Multiple Sclerosis Society and the Scientific and Educational Council of the American Foundation for Allergic Diseases.

Dr. Stanley Crain, who previously developed a technique for the microelectrode method for the investigation of nerve cells in tissue culture, greatly improved this technique and was able to grow and make electrical records from cells taken from the spinal cord, as well as from the conventional chick dorsal root ganglion preparation. Microelectrodes were inserted into individual nerve cells and recordings were made of both acting and resting potentials. A method of growing tissue cultures in mechanical suspension from a paper frame was also worked out.

Dr. Yoshigoro Kuzoiwa with Dr. Henry R. Liss studied the retrograde degeneration of nerve fibers and, with Dr. Christian Hovde, the possibility of the direct projection of sensory systems upon the striatum. Dr. Hovde continued his studies of the striatum, especially with regard to the electrophysiologic and the behavioral and metabolic effects of stimulation of this structure as well as the behavioral and metabolic effects of its ablation. He also began an examination of the connections of the subthalamic nucleus.

Dr. Liss made a study of the vascular supply of the base of the brain. He developed an electrode suitable for chronic implantation in the spinal cord. Mr. Walter Morgan also perfected an electrode for chronic implantation in muscle.

Dr. Fernando L. Orioli made a study of ataxia in which it was shown that cerebellar ataxia is not encountered unless efferent mechanisms of the brachium conjunctivum are significantly damaged. He also demonstrated that the descending limb of the brachium conjunctivum continues as far caudally as the end of the spinal cord and investigated the possible effect of activation of the rubrospinal tract on spinal cord reflexes.

Dr. Fred A. Mettler participated in the New York Academy of Medicine's Symposium on the Biological Aspects of Mental Disease and in the Association of American Law Schools' round table on Intent. He was also the James Arthur lecturer at the Museum of Natural History.

Dr. David Nachmansohn and his group continued their studies of

the chemical reactions associated with nerve activity and particularly on the role of acetylcholine in the elementary process of conduction. During the last few years studies of the proteins of the acetylcholine system have moved into the center of interest. The investigations of Dr. Irwin B. Wilson on the molecular forces of the active surface of acetylcholinesterase have not only greatly contributed to the understanding of enzymic hydrolysis, but have also been of importance for our concepts of the mechanism of nerve impulse conduction. They also resulted in a better understanding of the effects of various important drugs acting on the nervous system.

Particularly striking was Dr. Wilson's success in developing antidotes against the alkyl phosphates, the so-called "nerve gases," such as diisopropyl fluorophosphate (DFP), and to which belong many insecticides such as tetraethyl pyrophosphate (TEPP). These compounds owe their lethal effect to the inhibition of acetylcholinesterase. Their action was generally considered as completely irreversible. Based on his explanation of the mechanism by which these compounds react with the enzyme protein, Dr. Wilson has developed increasingly efficient compounds which can reactivate alkylphosphate inhibited enzyme. The synthesis of the compounds was carried out by Dr. Sara Ginsburg. The most efficient compound synthesized so far is picolinohydroxamic acid. It can reactivate 40 per cent of TEPP inhibited enzyme in one minute and more than 20 per cent of DFP inhibited enzyme in two minutes. Some of the compounds have proven their value as antidotes in animal experiments.

Dr. Wilson continued also his fundamental studies on the mechanism of hydrolysis by acetylcholine with the help of Dr. Enrico Cabib from Buenos Aires, who worked in our laboratory as Rockefeller Foundation Fellow.

Studies with the electric organs, which have been used by Dr. Nachmansohn for nearly 20 years in his studies on the fundamental mechanism of bioelectric potentials, continue to yield most pertinent information. Advance of our knowledge of the proteins of the acetylcholine system on the one hand and the single electroplax preparation developed by Dr. Mario Altamirano on the other, led to interesting new developments. New correlations between chemical reactions studied in vitro and electrical events recorded on the living cell were established in this work, which was carried out in collaboration with Dr. Wilson and Dr. C. W. Coates from the New York Aquarium. The data obtained threw new light on the mode of action of important drugs such as procaine, curare, decamethonium, prostigmine, etc.

Dr. Max Eisenberg investigated the mechanism of the formation of acetyl CoA. He prepared a purified preparation of the acetate activating enzyme and studied exchange reactions catalyzed by the enzyme with the

aid of radioactive phosphorous and carbon compounds.

Dr. Annemarie Weber is studying the effect of ATP on actomyosin sols. The interaction of actin and myosin to form a complex is necessary for muscular contraction. Dr. Weber's results indicate that ATP causes a dissociation of actomyosin.

The Neurological Institute was host to its Alumni on December 8. A program illustrating the various research activities of the members of the Neurological and Neurosurgical staffs was presented during the day and a dinner was held in the evening.

The Neurological Service was again host to the American Board of Psychiatry and Neurology for their examinations in December. Approximately 300 candidates were examined.

Dr. Merritt was chosen President-Elect of the American Neurological Association, and Chairman of the Senior Consultants to the Surgeon General of the United States Navy.

Dr. Merritt and Dr. Henry Alsop Riley attended the meeting of the Planning Committee for the Sixth International Neurological Congress in Brussels in September. Dr. Riley was elected Honorary President and Dr. Merritt Vice-President of the Congress, which will be held in 1957.

Nursing



ELEANOR LEE, R.N., Director

The Nursing Service continued to make every effort to provide care for all patients according to their need. During 1955 the progressive personnel policies did much to maintain the nursing staff, both graduate nurses and non-professional helpers.

Miss Margaret Eliot retired in June as Director of Nursing after 34 years of service to The Presbyterian Hospital. Her great contributions to nursing will be an inspiration always.

Miss Eleanor Lee was appointed Director of Nursing and, under the terms of the new agreement between the Hospital and the University, she was appointed Professor of Nursing and Executive Officer of the Department of Nursing of the Faculty of Medicine in Columbia University. Two principal assistants were appointed: Miss Marion D. Cleveland, Director of Nursing Service, and Miss Helen F. Pettit, Director of Nursing Education, who is Associate Professor of Nursing in the Department of Nursing of the Faculty of Medicine.

Another major change occurred with the retirement in June of Miss Lottie M. Morrison, Assistant Director of Nursing, after 30 years of association with Sloane Hospital for Women. Miss Mary I. Crawford, a graduate of the Frances Payne Bolton School of Nursing, Western Reserve University, was appointed Assistant Director of Nursing of the Obstetrical and Gynecological Service on July 1. Other new appointments included Miss Ruth M. Guinter, Assistant Director of Nursing assigned to the Medical and Surgical Services, and Miss Andrée L. Powell, supervisor, Harkness Pavilion. The resignations of Miss J. Margaret Ada Mutch, Assistant Director of Nursing, and Miss Waveney Towey, assistant in Harkness Pavilion, were accepted with regret.

During the last four months of 1955 the authorized positions on the graduate nurse staff were completely filled. In October, 20 per cent of this group were our own graduates of the Department of Nursing; 55 per cent were graduates of 116 schools of nursing in seven states, listed in order of number of nurses — New York, Pennsylvania, Massachusetts, New Jersey, Connecticut, California and Maryland; ten per cent were graduated from nursing schools in Canada; seven per cent from Great Britain; four per cent from Puerto Rico and four per cent from schools widely distributed in the United States.

The graduate nurse turnover for 1955 was 42 per cent, which was

comparable with that of the previous four years and showed a marked improvement over the 52 per cent turnover in 1950. During the four-month period beginning May 1, vacancies on the graduate nurse staff increased from eight per cent to fifteen per cent.

It is the consensus of the nursing group that adequate housing is of prime importance in attracting and keeping well-qualified graduate nurses. Apartments for 68 nurses were leased by the Hospital in the new Cabrini Terrace, located at 190th Street and Fort Washington Avenue, and were ready for occupancy in the middle of May. The furnishing of these apartments, arranged by the Hospital also, provides comfortable and modern housing, attractive to the graduate nurse. In addition 66 graduate nurses on the staff occupy furnished apartments in Linwood Park, Fort Lee, New Jersey, leased by the Hospital since 1950, and 210 graduate nurses are accommodated in Edward S. Harkness Memorial Hall.

The salary increases, effective July 1, with a minimum salary of $260 per month, were a major factor in attracting more and better qualified nurses to the staff.

The in-service program for graduate nurses places emphasis on the new opportunities for nurses here to participate in patient care as medical research expands. The nursing service committees were active in arranging educational programs throughout the year. At present other committees are studying group nursing, new techniques and work simplification, all of which contribute to the improvement of patient care.

It is worthy of note that only 40 per cent of the head nurse group are graduates of the Department of Nursing. The other 60 per cent includes graduates from a wide representation of other nursing schools. An in-service program for head nurses appointed since 1953 was arranged in the spring of 1955, consisting of panel discussions on professional attitudes, supervision, teaching and administration, and the use of auxiliary personnel. Special tours were arranged to the pharmacy, storeroom, central supply room and other service departments. In September Miss Lillian A. Oring, administrative assistant, Nursing Service, assumed the responsibility for the in-service program planning for all nursing groups.

Practical nurses are assigned to all of the clinical services and a regular program of lectures, demonstrations and films was held for this group. A series of classes for infant care technicians was started on the Obstetrical Service. Following a study during the Fall of the nursing needs of the patients on the Obstetrical Service, it was possible to increase the ratio of practical nurses and infant care technicians to graduate nurses. This decrease in the number of professional nurses assigned to this Service follows the modern concept of the nurse as a team leader responsible for the nursing care of her patients and for teaching health to the family. Auxiliary workers

are recognized as effective members of the nursing team and have an essential role in providing good care for our patients.

The on-the-job training program for the 235 nurses aides is now well-established and was completed by all new nurses aides during the year. In addition male attendants were included in these classes. Special mention should be made of the increase in salary to a minimum of $40 per week, effective in August, for the nurses aides, floor clerks, ward clerks, male attendants and junior secretaries.

During February ten graduate nurses, selected from 71 applicants, attended a refresher course, the fourth such course to be given here in recent years. Upon completion of the program, five qualified for appointments on the staff and three for private duty on the Registry. Miss Mary E. Windrow, administrative assistant, Nursing Service, directed this program.

Classes for volunteers interested in assisting with patient care were given for two groups this year. A special program for the volunteers during the fall was arranged in the Eye Institute and on the women's medical service. The bed-time program of "TLC" carried out by volunteers on the Pediatric Service continues to be most important in nursing care. The nursing staff is most appreciative of the volunteers.

The college aide program was in effect for the summer months, June through September 15. A group of 25 college students was given instruction in simple nursing procedures and assigned to medical and surgical services. Their contribution to the nursing care of selected patients was very helpful during this period when vacancies on the graduate nurse staff reached the peak for the year.

One of the most serious problems in nursing service at the moment is the inability of the Registry to fill all the orders for private duty nurses, most of them requested for acutely ill patients. The services of private duty nurses have been extended by the grouping of two patients per nurse, whenever possible. During 1955, the Registry filled a total of 15,726 calls, or 81 per cent, with private duty nurses; an additional three per cent of the calls were filled by staff nurses in Harkness, resulting in 16 per cent unfilled calls, of which one half were for evening duty. In an attempt to supply additional nurses to meet the present unfilled calls for evening and night duty, six additional staff nurses were employed December 1 for a three months' trial assignment in private duty nursing in Harkness Pavilion.

A new medical and surgical nursing office was established October 1 on the twelfth floor. Miss Ruth Guinter is in charge of this unit, assisted by Miss Ellen G. Smith, day supervisor, Miss Elizabeth Writer, evening supervisor, and Miss Lucille D. Manning, night supervisor.

The remodelled classrooms on the twelfth and fifteenth floors were

completed in August. The interest and support of the Hospital in the modernization of these teaching facilities is much appreciated. The classroom on the sixteenth floor, Obstetrical Service, was converted into a modern classroom during the spring.

The Honorable Oveta Culp Hobby, then Secretary of Health, Education and Welfare, was the speaker at the graduation exercises for the Class of 1955, held in the garden outside The Pauline A. Hartford Memorial Chapel on June 2. Dr. Grayson Kirk, President of Columbia University, introduced the guest speaker. Mr. W. E. S. Griswold, Jr., Secretary of the Hospital and Chairman of the Nursing Committee, presented the diplomas to the 110 members of the Class of 1955, the second largest in the history of the School. The Baccalaureate Service was held in the Chapel on the Sunday before graduation and the speaker was the Reverend Warren C. Heinly, father of the class vice-president.

The Nursing Committee held four meetings. New members of the Committee are Mrs. R. H. Egerton Elliott, Jr. and the Misses Cleveland and Pettit.

Miss Hsen-Ling Shen, a graduate of the School of Nursing at the National Defense Medical Center in Taipei, Formosa, received the third Anna C. Maxwell Fellowship. Miss Shen arrived in September for a year of graduate study and is a guest in Maxwell Hall. Miss Yvonne Hentsch, who was the Anna C. Maxwell Fellow last year, returned to Geneva in January. Miss Antonia Cancio, director of nurses of the Instituto de Oncologia of the University of Buenos Aires, was a guest in Maxwell Hall for three months during the spring. Miss Cancio was an enthusiastic observer of our nursing program.

Members of the Nursing Staff attended the following meetings: Miss Guinter, American College of Surgeons, Cleveland, February; Misses Dring and Windrow, United Hospital Fund's Nursing Aide In-Service Training Project for instructors, February and September; and also the inter-hospital study group on problems of auxiliary personnel, April; Misses Cora L. Shaw, Mary Karkanes and Marion K. Mifflin, National Society for the Prevention of Blindness, March; Miss Margaret Reid, New York Academy of Medicine's Eastern States Health Education Conferences, April; Miss Cecile Covell, National Association of Practical Nurse Education, Indianapolis, April; Misses Delphine F. Wilde, Kathlyn Y. Egan, Priscilla C. Clarke, National League for Nursing, St. Louis, May; Miss Theresa Dolan, Practical Nurses of New York, Inc., Syracuse, May; Misses Covell and Bernice R. Derby, American Hospital Association, Atlantic City, September; Mrs. Agnes Albro and Miss Writer, Institute for Evening and Night Supervisors, sponsored by the American Hospital Association, Department of Hospital Nursing and National League for Nursing, September; Miss

Mary M. Doyle, the institute conducted by the Maternity Center Association, October-November; Miss Crawford, American Public Health Association, Kansas City, November; Misses Cleveland, Elizabeth Krapowicz and Elizabeth Schreier, New York State Nurses Association, Buffalo, October; Misses Barbara J. Pier and Marjorie N. Porter, New York Heart Association's Rheumatic Fever and Rheumatic Heart Disease conference, November.

A new program in maternity nursing for graduate nurses, leading to a Master of Science degree or a certificate of proficiency under the Department of Nursing, Faculty of Medicine, in cooperation with Maternity Center Association, was started in September. This joint program includes the facilities of the Obstetrical Service of The Presbyterian Hospital. The first group of four graduate nurses started their clinical experience in November and members of the Nursing Service staff are assisting in the teaching.

The valuable assistance of Miss Cleveland in all aspects of nursing service deserves special recognition. The loyal support of the assistant directors in each of the clinical services has been significant throughout the year.

The entire nursing staff feels privileged to participate in the high standard of patient care maintained by both the professional staff and the administrative staff of the Hospital.

Obstetrics and Gynecology

HOWARD C. TAYLOR, JR., M.D., Director

The change in nursing direction, a function of surpassing importance on the Obstetrical Service was one of the most important events during the year. In July, Miss Lottie M. Morrison retired after 28 years of service as Nursing Supervisor of the Sloane Hospital for Women. These years were indelibly stamped with her warm and vivid personality. On the day of her retirement her position was filled by Miss Mary I. Crawford, who quickly won esteem for herself and whose enterprise already seems to promise the very best for the future.

Two other long-time associates of the Service retired during the year. Dr. Harbeck Halsted, appointed Instructor in 1919, retired on July as Attending Obstetrician and Gynecologist and Clinical Professor. Dr. Samuel A. Cosgrove, distinguished Director of The Margaret Hague Maternity Hospital in Jersey City, a hospital affiliated with the Medical School, also retired with the title of Clinical Professor.

The addition to the clinical staff of two able and well-trained part-time clinicians, and two experienced and devoted full-time teachers and investigators, brought the Service one step nearer to the ideal of a well-integrated department based on cooperation between part-time and full-time workers.

CLINICAL REPORT

The statistics for 1955 on total viable deliveries, fetal mortality and gynecological operations, as well as for each of the four preceding years and the average for the decade 1942-51, are shown in tables which follow.

Private and semi-private deliveries decreased slightly, but the number of ward deliveries increased to 2671, a figure which must be about the maximum the Service's facilities can handle. Gynecological operations, except in the semi-private category, were reduced a little.

The fetal mortality, 24.8 per thousand in the ward service and 9.3 per thousand in the private service, was gratifyingly low. The fact that the figures for each of the last four years were consistently lower than the 1942-51 average seems to indicate that a definite reduction in perinatal mortality has been accomplished.

The five deaths which occurred in relation to pregnancy at the

Medical Center gave us the highest rate for "maternal mortality" for many years. Only one of these, a case of eclampsia with atypical clinical signs and symptoms, could be ascribed to obstetrical causes, the others being due to a fatal disease, complicating but not caused by the pregnancy. The causes of these deaths were as follows: thrombocytopenia purpura on the fourth postpartum day; acute myelogenous leukemia on the twelth postpartum day; an operation for intracranial tumor (hemangioblastoma) during the fourth month of pregnancy; Wegener's granulomatosis, five and a half months postpartum.

The Sloane Hospital follow-up service, under Dr. David B. Moore, progressed in perfecting a system for the continuous check of results of cancer therapy. The total number of cases of malignant disease now in the files is 1576, with only six of the 955 ward patients regarded as untraceable. This represents an important step in the development of the division's cancer program.

CLINICAL STATISTICS

I. Viable Deliveries

	1942-1951 (average)	1952	1953	1954	1955
Ward	1,916	2,285	2,328	2,515	2,671
Semi-private	633	858	883	833	804
Private	661	553	557	501	493
Total	3,210	3,696	3,768	3,849	3,968

II. Fetal Mortality

	1942-1951 (average)	1952	1953	1954	1955
Ward	35.7/M	29.3/M	17.4/M	24.9/M	24.8/M
Semi-private & Private	25.4/M	22.7/M	22.2/M	17.9/M	19.3/M

(/M per 1,000 viable births)

III. Gynecological Operations

	1942-1951 (average)	1952	1953	1954	1955
Ward	714	818	899	906	782
Semi-private	187	359	544	408	485
Private	470	613	457	554	430
Total	1,371	1,790	1,900	1,868	1,697

RESEARCH ACTIVITIES

Research activities, for the most part conducted in the laboratories of the College of Physicians and Surgeons, were related to clinical problems on the wards of The Presbyterian Hospital and in the Vanderbilt Clinic.

PROBLEMS OF FERTILITY AND ENDOCRINOLOGY

The work in endocrinology continued to be concerned with the complicated inter-relationships of the many hormone substances produced by the anterior pituitary gland, the adrenal and the ovaries. Particularly important are the two pituitary or pituitary-like hormones: the adrenocorticotrophic hormone (ACTH) which stimulates the adrenal and the gonadotrophic hormone of the placenta. The hormones of the adrenal and ovary are simpler chemical substances, the so-called steroids, but the ever-growing list of compounds of this class, having widely different physiological effects, make this study one of the most complex as well as most vital among present day research needs.

Within this general field of work, Dr. Seymour Lieberman, Associate Professor of Biochemistry, and his group have been studying the effect of the administration of chorionic gonadotrophins, which it was found cause an increased excretion of certain metabolites of hydrocortisone. This result is explained by a primary stimulation of the ovary with a consequent increased production of estrogen, which in turn stimulates the pituitary to secrete additional amounts of ACTH.

The relationship of the steroids to a number of clinical diseases or disorders is also being examined in Dr. Lieberman's laboratory. These studies include investigations of the metabolic defect present in the Stein-Leventhal and in the Kimmelstiel-Wilson syndromes and in Cushing's disease. Another group of substances under investigation are the adrenal mineralocortico steroids, aldosterone and its metabolites. Dr. Stanley Ulick, Visiting Fellow, spent the past year in efforts to develop a chemical assay for these compounds, which can at present be estimated only by bioassay. Aldosterone is of importance in many conditions associated with edema, and a test for its ready detection would be of great value in the study of the large group of illnesses complicated by fluid retention. In another series of experiments depending upon the perfusion of isolated organs or the incubation of tissues, radioactive carbon-labeled steroids are being used to determine some of the finer details of the biogenesis of the estrogens, progesterone, testosterone and the adrenal hormone.

Dr. Joseph W. Jailer, Associate Attending Physician, and his group worked in close cooperation with Dr. Lieberman's laboratory during the year. He continued his work on adrenal virilism, having reached the pres-

ent conclusion that in this condition there is an enzymatic bloek in the synthesis of hydrocortisone which results in a temporary state of hypo-adrenalism as far as cortisone is involved. This eauses the pituitary to secrete exeessive amounts of ACTH, resulting in the hypertrophy and hyperplasia of the gland. In order to achieve normal amounts of hydrocortisone, there appears to be an exeessive production of the hydrocortisone precursors whieh are metabolized to steroids, which are androgenic. These thus produce the virilism eharacteristic of the disease. In another disorder based on bilateral adrenal hyperplasia, namely Cushing's syndrome, a hyper-responsitivity of the adrenal was demonstrated so far as the produetion of plasma eorticoids is eoneerned following the intravenous infusion of a standard dose of 25 units of ACTH.

In the Sterility and Endocrine Clinic, Dr. Anna L. Southam made a critical analysis of the present methods of diagnosis and therapy in 1213 patients observed in the Clinic since 1946. The results of this study were presented in part before the American Gyneeological Soeiety in Quebee by Dr. C. Lee Buxton, a member of this Service until one year ago and now Professor of Obstetries and Gynecology at the Yale University Medical Sehool. Dr. Southam is pursuing her studies of the effeets of various types of progesterone on the endometrium of women with anovulation, of post-coital tests made during the coneeption eyele and of patients with amenorrhea of long duration.

Dr. Harold Speert completed a study of the internal migration of the ovum and the fate of the residual ovary after unilateral oophorectomy, using for this investigation the record of hospital patients operated upon for tubal pregnancy.

PROBLEMS OF PREGNANCY

Dr. Albert A. Plentl and a group working with him eontinued research on the origin and fate of the amniotic fluid. The study was expanded to include plaeental transfer studies on experimental animals using selected tracer techniques with various isotopes.

Dr. Jailer's group studied the adrenal physiology of pregnaney by the examination of the adrenal funetion in two pregnant patients with Addison's disease, a eondition in which adrenal funetion is greatly depressed or absent. In such cases it must be assumed that hormones of the cortical type which may be deteeted must have some other source than the adrenal. A probable souree is the plaeenta. In pregnant women with Addison's disease there was observed a steady rise in the urinary 17-ketosteroids, so that near the end of pregnancy the steroids were of normal value or even higher. The plasma cortieoids in these cases were also

shown to rise steadily during pregnancy so that at term they were well up to normal limits. There is evidently some compensatory mechanism developed during pregnancy to supply the hormones which the defective adrenal is unable to provide in the non-pregnant patient with Addison's disease.

Studies of the developmental stages of extremely early pregnancy were continued by Dr. Landrum B. Shettles. He reported studies on human oocytes and ova and on a morula stage of the human ovum developed in vitro. Dr. Shettles' work involves unique observations on the earliest stages of human development.

Dr. Louise L. Phillips, Research Associate, continued her research on the role of fibrinogen and the fibrinolytic enzyme system in hemorrhage due to afibrinogenemia, which occurs infrequently during labor or immediately after delivery. This condition has been found in acute leukemia during pregnancy, with placenta previa, after elective cesarean section, ruptured uterus, curettage and manual removal of the placenta, as well as in five new cases of abruptio placentae. Since hemorrhage accompanied by low fibrinogen levels can start during surgery or in other conditions, some phases of this research were carried out in cooperation with the Surgical, Urological, Medical and Pediatric Services.

Clinical studies on the medical complications of pregnancy continued. For over a year work has been under way in the Vanderbilt Clinic, under the direction of Dr. Plentl, on the use of various pharmaceutical agents believed to have value in the treatment of anemias of pregnancy. So far, some 1500 patients have been studied. Cases of lupus erythematosus complicating pregnancy were reported by Dr. Emanuel A. Friedman and Dr. James W. Rutherford of the Resident Staff. The problems of advanced extra-uterine pregnancy were investigated by Dr. George Montgomery, Jr., and Dr. Clement Yahia of the Resident Staff. Dr. Yahia is now preparing a report on acute leukemia in pregnancy.

The problems of hypertension and heart disease in pregnancy continued to be the special interest of Dr. Alvin J. B. Tillman. He is at present working on a monograph, Toxemia of Pregnancy, which will be completed before the end of 1956.

The antigenic properties of chorionic gonadotropin in pregnancy are being studied by Dr. Herbert M. Magram of the Resident Staff, in collaboration with Dr. Otto M. Lilien, Clinical Fellow in Surgery at Francis Delafield Hospital. They report success in preparing anti-sera to specific hormone preparations and are at present engaged in comparative analyses of pregnant sera and the immuno-chemical properties of the eclamptic placentas.

PROBLEMS OF LABOR

A new and interesting system of studying the progress of labor was developed by Dr. Friedman of the Resident Staff, in consultation with Dr. D. Anthony D'Esopo. This was called a graphico-statistical analysis of labor and depends on the development of a curve plotting time against the dilation of the cervix. The method has now been applied to a series of multiparous as well as primiparous labors. Control curves were obtained, allowing a new insight into the duration of various phases of labor. The method is now being applied to the study of various abnormalities of labor and their treatment. It appears to be evoking wide interest as a practical method for the study of labor, and Dr. Friedman has had a number of invitations to write and speak on the subject.

Dr. Charles M. Steer continued work on the correlation of X-ray pelvimetry with the outcome of labor, and read a number of papers on the subject. He also conducted some clinical trials of the influence of the hormone, Relaxin, on normal and false labor.

FETUS AND THE NEWBORN

The animal experiments of Dr. Salome Gluecksohn-Waelsch, Research Associate, in the production of certain congenital or genetic defects having a bearing on similar problems in man, continued. She produced nervous system anomalies in mouse embryo by immunization against brain, while immunization against other organs was without effect. Study of hereditary chondrodystrophy, a kind of dwarfism, indicated that this defect may be recognized very early in embryonic life, when the limb buds are beginning to develop into cartilaginous extremities. With Dr. Helen M. Ranney, Assistant Physician in the Medical Service, Dr. Gluecksohn-Waelsch studied the genetics of two different hemoglobins in mice, finding that the mode of inheritance somewhat resembles that in man.

Dr. Steer demonstrated that there exists no statistically valid correlation between blood group incompatibility in the parents and the occurrence of abortion or of cerebral palsy in children. The possibility of recording electro-cardiographic changes in the fetus is also being explored by Dr. Steer, working with Dr. Claude G. Sureau, Visiting Fellow.

Work on the establishment of respiration in the newborn continued with Dr. Virginia Apgar, Attending Anesthesiologist, in cooperation with the Pediatric Service. This is part of a systematic effort to develop an investigation into the causes of loss of many new-born children during the first days of life and the eventual reduction or elimination of these deaths.

RESEARCH ON GYNECOLOGICAL CANCER

The frequency of cancer of the female reproductive organs continued to stimulate research in this general area. The work was a further development of investigation begun in previous years on the relationship of the steroid hormones to cancer, the biology of the degree of malignancy in ovarian tumors, radiosensitivity and a number of smaller projects.

Dr. Lieberman and his group are studying various aspects of the steroid metabolism of cancer patients in both the Presbyterian and the Francis Delafield Hospitals. In particular, ketosteroid excretion is being measured in gonadectomized and adrenalectomized patients, both before and after the administration of various steroids.

The systematic search for measurable biological or biochemical properties that may underlie the various grades of malignancy manifested by ovarian and other gynecological cancers continued in a group of cooperating laboratories. Study of the ovarian tumors by multiple sections demonstrated a remarkable degree of microscopic consistency throughout each individual tumor.

A correlation between the number and size of the nucleoli of the cells with increasing degrees of malignancy was demonstrated by Dr. Margaret E. Long, Research Associate. This is a point of apparent significance, since the nucleolus is one of the important sites of ribonucleic acid, a substance of fundamental importance in cell physiology. Dr. Saul Bader, Research Associate, also studying the nucleoproteins in the same series of cases, is working with the principle of absorption microspectrophotometry. He is giving particualar attention to the desoxyribosenucleic acid associated with the chromosomes of the nuclei.

Biochemical and metabolic studies of the same material are being conducted by Dr. Helena deRoetth, Research Associate, who is examining the oxygen uptake of tissue slices in air and oxygen, both with and without added glucose. Here both ovarian and uterine tumors seem to show a progressive increase in oxygen consumption with increasing malignancy. She is also studying the incorporation of radioactive carbon-labeled glucose into these tumor slices and began preliminary work on the amino-acid content of the soluble proteins of gynecologic tumors, again depending, in part, on the use of radioactive carbon (C^{14}) as a means of identification.

With the same material, Dr. Dudipala V. N. Reddy, Research Associate, is making a systematic investigation of the in vitro turnover rates of nucleic acids, nucleo tides and phospholipids in the ovarian tumors. He is also examining the activity of the enzymes, D-amino acid oxidase and the possible mechanism by which the tumor extracts inhibit the D-amino

acid oxidase system. This large program is being conducted in collaboration with Dr. Michael Kopac, Professor of Biology, New York University, who is studying individual cell physiology in the same types of tumors. With its many ramifications, it may yield some important data on the fundamental nature of the quality of malignancy.

The laboratory for clinical cytology continued to be very active under the direction of Dr. Saul B. Gusberg. Over the last few years an important routine responsibility has developed in the form of the Papanicalaou vaginal smear test. Some 5200 tests are carried out annually by this group as a simple diagnostic test for the presence of uterine cancer.

Beyond this routine function, Dr. Gusberg's group is obtaining increasing recognition among investigators attempting to find methods of distinguishing those cases of cancer of the cervix most suitable for radiation or those most suitable for surgery. A widely-heralded test developed in another institution is based upon the proportion of cells having a certain staining reaction as they are shed from the normal mucosa. The clinical cytology laboratory is now checking this method and comparing it with the one developed here, which depends upon the examinaion of a biopsy specimen taken shortly after a preliminary or trial course of X-ray therapy.

Dr. Harold M. M. Tovell continued his efforts to transplant human gynecologic tumors into lower animals. During the first nine months of this new project, some 44 human tumors were examined, of which about a quarter could be transplanted into radiated or cortisone treated hamsters for two or more generations. This recently-developed technique promises an important field for the future study of human neoplastic disease.

MISCELLANEOUS RESEARCH ACTIVITIES

Efforts to developed a broad study of psychiatric and emotional factors in obstetrics and gynecology are proceeding slowly. Studies of the emotional factors of pelvic pain continued under Dr. Lothar Gidro-Frank, psychiatrist, and Miss Thelma Gordon, psychologist. Dr. H. C. Taylor, Jr. establishes gynecologic diagnosis of these cases in a special consultation clinic, and psychological testing is then carried forward by Dr. Gidro-Frank and Miss Gordon. Dr. Gidro-Frank gave a report of observations in the reproductive performance of women with pelvic pain of long duration at the annual meeting of the American Society for the Study of Sterility.

Dr. Speert completed a series of about 25 essays on eponyms in obstetries and gynecology, many of which have already been published. These essays are an important contribution to the history of the specialty.

A study of urinary stress incontinence was initiated in the Vanderbilt Clinic by Dr. Arnold N. Fenton and Dr. D'Esopo.

Dr. David B. Moore organized a follow-up clinic, a function so important in the appraisal of the work of any medical service. This is proving particularly valuable in following up cases of gynecological cancer to determine the best methods of therapy.

In the Gynecology Clinic, systematic studies of an orally effective trichomonicide, 2-acetylamino-5-nitrothiazole, were completed under the direction of Dr. Plentl. A new anti-spasmodic agent is also being tested on patients with post-operative or post-partum urinary retention.

Dr. Shettles, in association with Dr. Frederic J. Agate, Assistant Professor of Anatomy, is continuing his efforts to develop a dependable technique for the measurement of pelvic blood flow. Such an instrument would afford numerous opportunities for clinical physiologic observation.

Dr. Earl T. Engle, Professor of Anatomy, continued in charge of the pathology laboratory of the Service and the instruction of the Resident Staff assigned to this work. He also remained general consultant in all aspects of morphologic and endocrinological research. His own studies continued, particularly with Visiting Fellows, on various special problems of the histology and physiology of the endometrium.

THE BULLETIN OF THE SLOANE HOSPITAL

The Bulletin of the Sloane Hospital for Women in the Columbia-Presbyterian Medical Center was established during the year under the editorship of Drs. D'Esopo, Tovell and Robert E. Hall. Four issues were published, with circulation reaching 500 copies per issue and appearing to increase steadily.

The purposes of the Bulletin are manifold. First, it is the official organ of the Service in keeping its Alumni and other interested persons informed about the work conducted in the clinical and laboratory fields. Secondly, it performs a teaching function by providing a forum for the discussion of methods to manage various clinical problems in obstetrics and gynecology. It is hoped and believed that the journal will do much to create interest in the Service and retain the loyalty of former associates.

PROGRAM IN GRADUATE OBSTETRICAL NURSING

A brief glance at obstetric history recalls the fact that until recently. even in the United States, the majority of deliveries were conducted by midwives, women often with little experience and usually no formal training. Enormous improvements occurring in American obstetrics over the past decades were associated with the virtual disappearance of the old-fashioned midwife and the assumption of responsibility for all deliveries by qualified physicians.

In very recent years, however, there have been signs that the tendency to remove the nurse from any direct participation in the care of the patient during the antepartum weeks and the earlier stages of labor may have gone too far. The controversial but insistent demand by a portion of the laity for care based on the principle of "natural childbirth" may have as one of its sources the apparent need for a sympathetic and informed female attendant during labor.

In some smaller hospitals with inadequate resident staffs and attending staffs busy with many outside responsibilities, the institutionalization of all obstetrical care has resulted in a situation where the patient, though "safely in the hospital," has been largely without trained supervision during much of her labor. There is finally a need, both in America and abroad, for exceptionally trained nurses to serve as directors of nursing in maternity services.

With these facts in mind, there have been discussions for two years between representatives of the Presbyterian Hospital and the Maternity Center about the development of a program in graduate obstetrical nursing. An original plan whereby patients initially registered at the Maternity Center Clinic would be cared for during labor and delivery at the Medical Center by Maternity Center nurses, under the direction of members of this Service, was unsuccessful. This was mainly due, it seems, to differences in concept about the techniques to be employed. Trial with this original plan, and the recognition of its defects, led to the development of the present cooperative program which was put into effect during the fall.

At present, the graduate program consists of a period of theoretical instruction in principles of public health and obstetrical care at the Columbia University College of Physicians and Surgeons, and some practical instruction in the clinic, wards and delivery rooms of the Presbyterian Hospital. A period of practical experience while working with the Maternity Center is added to this. Nurses entering the program with proper academic prerequisites, will be candidates for a Master's Degree in Nursing from Columbia University.

STAFF ACTIVITIES

The members of the staff continued their scientific activities throughout the country. Dr. Gusberg was Chairman of the symposium on the radiosensitivity of cervical cancer, held before the American College of Surgeons in Chicago, and Chairman of the symposium on endometrial cancer of the Inter-Society Cytology Council meeting in Cleveland. He was elected Assistant-Secretary and editor of the Transactions for the New York Obstetrical Society and a member of the Society of University

Gynecologists. Dr. Engle is serving as Chairman of the American Medical Association Committee on Steroids and Hormones and has served as Chairman of the Conference on Steroids and Hormones and the Ageing Process held at Arden House.

Dr. Stephen G. Burgess, a member of the Resident Staff, who had been given a year's leave of absence to work at the University Obstetrical and Gynecological Clinic in Vienna under a Jules S. Bache Fellowship, completed his work there in June, 1955. Dr. Mary Jane Gray, also on a year's leave of absence from the residency, worked at the Radiumhemmet in Stockholm as a Barnes Foster Fellow from January 1 to December 31, 1955.

Dr. Plentl spent two months lecturing in South America. He conducted certain parts of his research program in Uruguay, where facilities were particularly suitable, and was named an honorary member of the Chilean Society of Obstetricians and Gynecologists.

Dr. Taylor completed his term as President of the American Cancer Society and continues as a Director. He received the honorary degree of Doctor of Science from New York University.

Two members were added to the full-time staff. Dr. Raymond L. Vande Wiele, a graduate of the University of Louvain, Belgium, and a former resident of the Obstetrical Service in that University, became an Instructor. An interesting point is that the present Professor of Obstetrics at the University of Louvain was formerly a member of the Residency Staff of the Sloane Hospital. Dr. Vande Wiele has been in the United States for two and a half years, and has devoted most of his efforts during this time to the study of endocrine relations in obstetrics and gynecology. Dr. Gilbert J. Vosburgh was appointed Associate Professor of Obstetrics and Gynecology. Dr. Vosburgh, a former member of the staffs of Johns Hopkins Hospital and Western Reserve Medical Schools, came to us with a distinguished record of research on the physiology of pregnancy, and will continue working in this and allied fields as well as carrying out the clinical and teaching responsibilities of a full-time member of the staff.

In the research laboratories of the Medical School, associated with the research work of the Hospital, two Research Associates were added. Dr. Bader is working on the microspectrophotometry of cancer cells and Dr. Joel Bitman is engaged in the steroid laboratories of Dr. Lieberman.

Working in the Service during the year were five Visiting Fellows or Scholars: Dr. Gunnar Karl Af Geijerstam of Stockholm, Dr. Claude Guy Sureau from Paris, Dr. Victoriano Valverde-Pinedo of Valladolid, Dr. William J. Jameson from Schenectady, and Dr. Henrietta E. Banting, the recipient of a Barnes-Foster Fellowship. There were 34 officially-recorded visitors from 16 different countries.

Ophthalmology

JOHN H. DUNNINGTON, M.D., Director

In 1955 there were 2,930 admissions, and 2,967 patients received 24,348 days of care. The operations performed numbered 2,742. Ophthalmologists from many countries visited the Institute of Ophthalmology and participated in its day-to-day activities.

Members of the Service continued their contributions and outside activities. Dr. Ludwig von Sallmann read a paper on species difference in radiosensitivity of the lens epithelium at the National Research Council in Washington in March. Dr. John H. Dunnington, the third American to be so honored, delivered the Bowman Lecture before the Ophthalmological Society of the United Kingdom in April. His subject was ocular wound healing with particular reference to the cataract incision. The following month he addressed the Ophthalmological Section of the Royal Society of Medicine in London on hypotony after cataract extraction.

Dr. Algernon B. Reese served as President of the American Academy of Ophthalmology and Otolaryngology during 1955. In January he delivered the Gifford Lecture before the Chicago Ophthalmological Society. His subject was the relationship of hemangioma of the retina to Coats' Disease. He delivered the Bedell Lecture in Philadlephia on the treatment of expanding lesions of the orbit with particular regard to those arising in the lacrimal gland. Dr. Gordon M. Bruce read a report before the American Ophthalmological Society in June on permanent bilateral blindness following the use of hexamethonium chloride. He continued to serve as a member of the American Board of Ophthalmology, as editor of the Transactions of the American Ophthalmological Society, and as assistant editor of the Acta Ophthalmologica. Dr. Maynard C. Wheeler continued as Secretary-Treasurer of the American Ophthalmological Society and was elected Chairman of the Eye Section of the New York Academy of Medicine. Dr. Raymond L. Pfeiffer received the honorary degree of Doctor of Science from Wittenberg College. Dr. John P. Macnie served on the faculty of the Ophthalmological Study Council and of the home study course conducted by the American Academy of Ophthalmology and Otolaryngology. Dr. Willis S. Knighton continued as Chairman of the Committee on Glaucoma of the National Society for the Prevention of Blindness. Dr. Frank D. Carroll was elected Chairman of the Section of Ophthalmology, Medical Society of the State of New York, and acted as moderator of the symposium on diseases of the optic nerve at the meeting of the American Academy of Ophthal-

mology and Otolaryngology in October. Dr. Philip Knapp presented two lectures at a strabismus symposium, sponsored by the New Orleans Academy of Ophthalmology in February. Dr. George R. Merriam, Jr. presented a paper on the late effects of beta radiation on the eye before the Radiological Society of North America at its meeting in Los Angeles, and spoke on correlation between radiation doses and incidence of cataract before the American Radiation Society in Washington. Dr. Robert McC. Day, in collaboration with Dr. Dunnington, contributed a chapter on the eye to The Thyroid, published in October by Paul B. Hoeber, Inc. of New York and Cassell and Co., Ltd., of London.

Many members of the Service continued to engage in research, largely under the guidance of Dr. von Sallmann. Dr. Otto Lowenstein, with the assistance of Miss Irene Loewenfeld, continued his pupillographic studies. The laboratory of pupillography contributed an exhibit prepared in conjunction with the Public Health Service of the U.S. Department of Health, Education and Welfare, which was shown at the meeting of the American Academy of Neurology in Houston in April, and in the section of ophthalmology at the American Medical Association meeting in Atlantic City in June. Dr. Lowenstein reported the results of his studies of the second afferent neuron of the pupillary light reflex arc, alternating contraction anisocoria combined with general fatigue and peripheral neuritis in a benign post-infectious disorder of the anterior midbrain, the mechanism of miosis in the Argyll Robertson pupil and in similar pupillary disorders, and central nervous localization of autonomic symptoms in primary glaucoma.

Dr. Deborah Locatcher-Khorazo, working with Dr. Seymour P. Halbert and Dr. Beatrice C. Seegal of the Department of Microbiology of the Medical School, continued her immunological studies on the lens. She presented an exhibit on microbiology and its contributions to ophthalmology at the meeting of the Society of American Bacteriologists held in New York in May. She also continued her studies of the ocular flora.

Dr. Reese, with the assistance of Dr. George A. Hyman of the Medical Service, is continuing his investigation of the effects on retinoblastoma of radiation and triethylene melamine. There were 171 treatments by the former and 37 by the latter in various forms of administration. Most of the tumors have been arrested to date.

Drs. Reese, Merriam and Arnold Forrest continued to investigate irradiation in ophthalmology. All residents in ophthalmology and radiology are assigned for a time to this service. In all, more than 600 treatments were given. The investigative work on radiation cataracts continued and it was possible to plot a probability curve.

Dr. Knighton and Dr. Andrew deRoetth, Jr. continued their re-

search in the Glaucoma Clinic and Research Laboratory. The effect of Diamox, the value of tonography and gonioscopy, and the metabolic activity of the ciliary body are still under investigation. The previously reported high concentration of cytochrome and cytochrome oxidase in the ciliary processes was substantiated by the use of p-phenylenediamine.

The Muscle Clinic and Orthoptic Laboratory, under the supervision of Drs. Wheeler and Knapp, continued its work on motor anomalies. Nearly 600 patients were examined during the year.

The pathology section, under the supervision of Dr. Reese, assisted by Dr. Joseph A. C. Wadsworth, prepared over 400 specimens in 1955. Specimens for diagnosis were sent from many foreign countries. Records were completed by photography of gross and microscopic specimens. Tissue culture, continued by Dr. Gabriele Ehrlich, progressed satisfactorily. In all, 33 neoplastic tissues and one normal tissue were successfully cultured.

The photographic section is being reorganized, but photographed more than 450 patients during the year. It added to its collection more than 1300 kodachromes and more than 1000 black and white prints.

The X-ray section, under the direction of Dr. Pfeiffer, assisted by Dr. Ira S. Jones and Mr. James Lafayette, examined more than 500 patients and added nearly 4000 films to its collection.

The activities of the Knapp Memorial Laboratory of Physiological Optics continued under Dr. Gertrude Rand and Miss Catherine Rittler, together with Dr. Charles Campbell, a resident. They assembled and calibrated an eight-channel electroencephalograph adapted for use in electroretinography as well as stroboscopic sources for use in electroretinography and flicker fusion. Studies in eikonometry continued and over 500 examinations were made this year. Work also continued on dark adaptation. Of 32 patients examined, 30 were found to be abnormal.

Several members of the resident staff engaged in research activities. Dr. William G. Everett developed an X-ray machine capable of measuring the true length of the human eye within two-tenths of a millimeter. He also developed an operation for shortening the eyeball by folding the sclera outward rather than excising a strip of that tissue.

Dr. John M. Walcott and Dr. David H. Rhodes, working under the direction of Dr. von Sallmann, studied the mechanism of absorption of experimentally induced hemorrhages.

Dr. Robert P. Burns, under the supervision of Dr. Halbert, microbiologist, working with the Ouchterlony agar precipitin method, studied antigen formation by staphylococci. He treated some 50 patients suffering from inflammatory disease and is continuing the investigation.

Dr. Anthony Donn demonstrated that intravenous typhoid vaccine therapy results in a sharp increase in patients' adreno-cortico-steroids,

roughly paralleling febrile response. When the latter is blocked by the prior administration of aminopyrine there is no rise in the circulating adrenocortico-steroids. He is continuing his studies on the diagnosis of malignant melanoma of the choroid by the use of radio-active phosphorus.

Dr. Bradley R. Straatsma undertook a study to classify meibomian gland tumors to determine histologic criteria for their diagnosis and to correlate the clinical picture with the pathologic findings.

In addition to the foregoing many clinical investigations are still in progress. These include the study of wound healing by Dr. Dunnington and Dr. Ellen F. Regan; the study of motor anomalies by Dr. Wheeler and Dr. Knapp; investigation of diseases of the optic nerve by Dr. Carroll; the treatment of blepharoptosis by Dr. Raynold N. Berke; and investigation of all phases of detachment of the retina by Dr. Graham Clark. Dr. Clark completed his work begun last year at the Massachusetts Institute of Technology on an electronic instrument to detect and record the position and movement of the eye. This instrument, known as the Electro-oculograph, is now installed in the electro-physiology laboratory of the Institute of Ophthalmology, and will be operated under the direction of Dr. Knapp.

Orthopedic Surgery

ALAN DE FOREST SMITH, M.D., Director

The end of the year marked the fifth anniversary of the move of the New York Orthopaedic Hospital to the Medical Center. The objects prompting the merger of the Orthopaedic and Presbyterian Hospitals have been abundantly realized. Patients undoubtedly received better care through the ready availability of the services of all branches of medicine and surgery. The addition of the excellent fracture service met a long-recognized deficiency in the Orthopaedic Hospital and increased the facilities for treatment of acute injuries of the musculoskeletal system. The Hospital now has a complete unit for the care of all kinds of conditions affecting these structures. During the past five years there has been a noticeable increase in the number of complicated cases admitted to the Service, evidently a result of its closer association with other services.

The teaching of medical students has been greatly facilitated by the situation of the Hospital in the Medical Center, both by the availability of clinical material and the saving in time previously used in travelling to 59th Street. The training of residents in orthopedic surgery also has been much improved by the easy access to laboratories and the interchange of ideas with other services.

A notable change in the nature of orthopedic surgery has occurred during the past 40 years since the Orthopaedic Hospital first occupied its previous site. There has been a conspicuous decrease in the number of children coming for treatment and a corresponding increase in the proportion of adults. This is explained by the greatly improved methods of treating tuberculosis of bones and joints, once constituting the main source of orthopedic cases, and by the effect of antibiotics in the treatment of acute pyogenic lesions of bones and joints. Congenital deformities are now recognized earlier and treated more effectively. At the same time, there has been an awakened interest in crippling conditions affecting adults. One of the most noticeable of these is the group of low back disabilities, including lesions of the intervertebral discs, and the increased occurrence of arthritis of the hip and other joints. The reduction in the incidence of paralytic poliomyelitis which promises to follow the widespread use of the new vaccine may well reduce still further the number of children on the Service.

A trend with a serious implication for all teaching hospitals is the increasing number of patients who are provided with various kinds of insurance entitling them to semi-private care. This is particularly important on

an orthopedic service where so many cases qualify under the long-established compensation practice. This results in a very considerable reduction in cases which can be cared for by the resident staff. To a lesser degree, it also affects the clinical material for teaching undergraduate students. Some solution of this problem must be found if the present standards of teaching and graduate training are to be maintained.

To meet the demands of the situation, the west ward of the fifth floor, which is assigned to the fracture service, is being changed into smaller units of two and four beds. This will mean more flexibility in caring for male and female, ward or compensation cases. The closing of this ward from early July reduced the number of beds on the Service during the second half of the year.

The efficacy of cathode ray sterilization of bone grafts procured from cadavers was confirmed by a study of 100 cases in which such grafts were used. Two infections occurred in this series, neither of which appeared to implicate the graft. This rate is about the same as that usually occurring in all cases on the Service. Drs. C. Andrew Bassett and Thomas F. Hudgins, Jr., of the New York Orthopaedic Hospital, and Drs. J. G. Trump and K. A. Wright, of the Massachusetts Institute of Technology, read a paper on this subject before the Clinical Congress of the American College of Surgeons in November.

In the histochemistry laboratory, established in the College of Physicians and Surgeons, Drs. Bassett, Gabriel Godman, Karl Meyer and Charles Ragan collaborated in the application of tissue culture techniques in certain biological and biochemical studies. A progressive change in the metabolic activity of tendon cells in vitro was demonstrated. The nature of the polysaccharides produced by these cells altered after a number of months. This change was closely correlated with alterations in morphology. In contrast with this, osteoblasts remained remarkably constant in their behavior as judged by alkaline phosphatase activity. It was discovered that the presence of a small amount of bone in the culture apparently can induce the cells to retain or regain high levels of cytoplasmic alkaline phosphatase activity.

Dr. Harrison L. McLaughlin contributed a chapter on The Muscles, Fasciae, Tendons and Bursae for a book on Operative Technic in General Surgery, edited by Dr. Warren Cole.

An exhibit by Dr. Frederick S. Craig, of the instruments and techniques for vertebral biopsy developed by him, received an award of merit at a meeting of the American Academy of Orthopedic Surgeons. Dr. Craig also showed a moving picture on this subject at the meeting of the New York State Medical Society.

Dr. Charles S. Neer, II, published articles in the Journal of Bone and Joint Surgery and the American Journal of Surgery on an articular replacement for the humeral head, which he devised.

The Out-Patient Clinic treated 13,781 new patients and 30,774 visits were made by old patients. Days of care given to 1147 patients on the wards totaled 22,674.

Numerous papers in professional journals were published by various members of the Service and many colleagues participated in postgraduate courses for the American College of Surgeons.

Otolaryngology

EDMUND P. FOWLER, JR., M.D., Director

During the year, two new types of middle ear operations done under a low-powered sterile microscope with powerful lighting and long focal distance progressed from the University laboratories to the operating rooms of the Hospital.

The first operation called "mobilization of the stapes" for otosclerosis is a delicate procedure performed by lifting the ear drum and rolling it forward so that part of the fixed stirrup-shaped bone is visualized. A controlled fracture of the footplate and one arm of this, the smallest bone in the body, is carried out. The drum head is replaced and in the present stage of its development about one third of the cases of otosclerosis have improved hearing. Experiments now going on promise to improve this ratio considerably. The second operation, called "tympanoplasty," consists of removal of adhesions in and around all three of the tiny bones of the middle ear and if necessary from the round window. Following this, there is a plastic repair of perforations and the phase relationships between the windows are changed if necessary. This operation is individualized for each case of healed middle ear disease.

On the medical side, patients with labyrinthine apoplexy causing sudden deafness are being treated with intravenous procaine, with or without anticoagulation techniques. Two cases out of ten that had previously been given up as impossible of improvement were markedly helped. The anticoagulation work was carried out with the assistance of Dr. Stuart Cosgriff of the Medical Service. There was a decrease in the necessity for doing the destructive operation of Day for advanced cases of Meniere's disease, apparently because of the improvement of medical management of this affliction. Although dilation therapy has decreased the duration of many cases of Bell's palsy, during the year we saw an increase in the surgery for facial paralysis. Perhaps this is because the Ear, Nose and Throat Service is interested in facial paralysis. In spite of attempts to improve the treatment, the Service's most vexing problem during the year was the old one of how best to care for serious epistaxis and recurrent nasal polyps.

From July 1, the Service was hampered by the inconvenience of conversion of a female ward into smaller units. There will be no change in the number of beds designated for ward teaching, but the new construction should materially improve the efficiency of patient admissions and discharges.

Dr. Jules Glashow and Dr. Douglas Lake joined the Service in the Vanderbilt Clinic. Dr. Peter Westerhoff, Sr., regrettably found it necessary to resign for reasons of health.

During the past year, Dr. Franz Altmann showed his film on the embryology of the ear at the meeting of the New York State Medical Society in Buffalo. In July he flew to Europe to study tympanoplasty and to participate at the Collegium Otolaryngologicum meeting in Yugoslavia. He attended the meeting of the Turkish Ear, Nose and Throat Society in Istanbul. During his European trip he demonstrated his film, The Embryology of the Ear, in Siegen, Munich, Innsbruck, Vienna, Zagreb and Istanbul. The film was also officially shown at the Academy of Ophthalmology and Otolaryngology meeting in Chicago, where a special award of merit was presented to Dr. Altmann. Shortly afterward he received the Charles Bramman Award in New York City.

Dr. Edwin Bilchick continued his study of the use of nasopharyngeal applicator for moderately increased lymphoid tissue in the nasopharynx.

Dr. Edmund P. Fowler, Jr., served on the faculty for the mid-winter courses in otolaryngology at the University of Florida in Miami. He gave a talk on dizziness for the Onondaga County Society at Syracuse, where he also discussed stapes mobilization. He gave a talk on recruitment for the American Laryngological Rhinological and Otological Society, and a talk on small blood vessel circulation in the human conjunctiva at the Microcirculatory Conference, both in Philadelphia. He served on a panel with the postgraduate fortnight in geriatrics, discussing the problems of hearing in the aged. Dr. Fowler was re-elected President of the New York Otological Society and to the Council of the Microcirculatory Conference. He was appointed Secretary of the Audiology Foundation following seven years' service as President. He also attended the meeting of the Collegium Otolaryngologicum in Zagreb, where he read a paper entitled Psychological and Constitutional Types in Otosclerosis and Meniere's Disease, and showed a slow-motion film indicating how stapes mobilization work. This film was also used in Istanbul at the meeting of the Turkish Ear, Nose and Throat Society for a discussion of Dr. Samuel Rosen's paper on this subject. Here, possible new methods for obtaining a high percentage of good results were outlined. Dr. Fowler accompanied Dr. Altmann to Siegen to study the German methods for tympanoplasty.

Dr. DeGraaf Woodman completed the chairmanship of the section of Otolaryngology of the New York Academy of Medicine. He read a paper before the American Laryngological Society on the treatment of laryngeal papillomata, another before the Baltimore Ear, Nose and Throat Society on preservation of function in laryngeal surgery, and a third at an Academy of Ophthalmology and Otolaryngology meeting on voice return through sur-

gery and speech therapy. At this meeting he also gave a course on glottic obstruction.

The exhibit, originally prepared for the twenty-fifth anniversary of the Medical Center and entitled Twenty-five Years of Progress in Otolaryngology, was shown at the American Medical Association meeting in Atlantic City and at the Academy of Ophthalmology and Otolaryngology meeting in Chicago, where it caused considerable comment by those uninformed in the growth and development of the specialty in general hospitals. This exhibit was rearranged for extramural showing, largely through the efforts of Dr. Milos Basek, Dr. Vladimir Epanchin and a third year medical student, Mr. John Rathe. Although listing advances of all kinds in otolaryngology, including radical neck surgery and radiotherapy up to and including the Betatron, it also noted as many ordinary treatments and diagnostic procedures in the specialty as possible — from placing a polyethylene tube in the middle ear for catarrhal otitis to the use of a flexible gastroscope. In particular, it featured the original works of Dr. DeGraaf Woodman on arytenoidectomy and improvement of hearing for congenital atresia of the ear; Dr. Daniel Baker in endoscopy; many members of the Service in tracheotomy; Dr. Bela Marquit and Dr. Herbert S. Friedman in functional rhinoplasty; Dr. Altmann in middle ear surgery; Dr. Fowler in the medical treatment of rhinitis, Meniere's disease and facial paralysis, as well as surgery of the facial nerve, stapes mobilization and fenestration. In addition, there were four panels depicting the activities of the Speech and Hearing Clinic, arranged by Mr. Donald Markle who was then its Supervisor. Mr. Markle subsequently resigned to create a new audiology clinic at the New York-Bellevue Medical Center. His place as Supervisor at the Lester Hofheimer Clinic was taken by Mr. Maurice Miller, who came from the Walter Reed Hospital Audiology Center in Washington.

Miss Elaine Kellerman and Miss Leanne Atkinson also joined the Speech and Hearing Clinic. Miss Sylvia Morgan gave a lecture in Los Angeles before the American Speech and Hearing Association and also at Hunter College on techniques for testing the hearing of the pre-school child. Mrs. Shulamith Kastein gave a paper on speech problems in children with mental retardation at the American Association for Mental Deficiency convention in Detroit and a series of lectures on cerebral palsy at Pennsylvania State College. She also gave several talks on aphasia, stuttering and speech in the brain-injured child at local meetings and universities.

Dr. Claude Pennington, Chief Resident on the Service, read a paper at the New York Academy of Medicine indicating that cystic fibrosis often occurs in the nose and sinuses of patients with pancreatic fibrocystic disease and that treatment of the nasal condition will often materially aid in the management of these cases.

Numerous papers were published in professional journals by vario members of the Service.

During the year 3887 new patients were treated in the Out-Patie Department, which was an increase of 179 over last year. There we 1256 admissions to the Presbyterian Hospital with 1057 operations. The were 823 admissions to Babies Hospital with 787 operations. There we 2060 consultations.

Pathology

HARRY P. SMITH, M.D., Director

The reputation of a Service depends in part upon its ability to provide advanced training which will qualify men for leadership in academic medicine. This training is based on a sound residency program for younger members of the Service. The staff appointments which follow the residency should represent a continuous and steady progression in responsibility. Opportunities are provided at intermediate levels when older members of the staff accept academic responsibilities elsewhere. A gradual turnover in personnel stimulates the hopes and aspirations of all concerned. Dr. Robert W. Coon, for example, recently accepted a position as Head of the Department of Pathology at the University of Vermont. This appointment followed a year after that of Dr. Joseph E. Flynn, who accepted a similar post at the University of Missouri. On July 1 Dr. Fred V. Lucas was appointed to the Service, filling the position vacated by Dr. Flynn. A replacement for Dr. Coon has also been obtained and will join the Service soon.

At the residency level it is necessary to maintain flexibility in organization. It is essential that a residency program developed for the training of pathologists should take into account recent trends in laboratory medicine. It is no longer realistic to provide young pathologists with training in pathologic anatomy alone. They need to be trained in the various branches of clinical pathology also. The large teaching hospitals have many advantages; nevertheless the fragmentation of laboratories and their dispersal among many departments create difficulties in the organization of an integrated training program. With widening horizons the department finds it desirable to develop relationships with laboratory units of other hospitals nearby. Thus the Francis Delafield Hospital provides outstanding opportunities, especially in surgical pathology and in the study of neoplasms. Certain other hospitals having integrated programs in clinical pathology may afford opportunities to residents already trained in other branches of pathology at the Medical Center. In this way, through informal affiliation, it is possible to develop a flexible program of training, adaptable to the varied interests of men who enter this rapidly growing branch of medicine.

The necropsy service continues to be an important training unit for the entire Medical Center. It is a focal point for students, as well as for members of the clinical departments. In addition to instruction, it provides opportunities for research on a wide range of topics of interest

to the members of many Services. This is reflected in the following table showing ratio of necropsies to deaths on the various services for 1955:

Dermatology	0
Medicine	63
Neurology	46
Neurosurgery	45
Obs. & Gyn.: Adults	67
Neonatal	56
Ophthalmology	50
Orthopedic Surgery	25
Otolaryngology	33
Pediatrics	81
Private	43
Psychiatry	0
Surgery	50
Urology	30
Average	57

Pediatrics

RUSTIN McINTOSH, M.D., Director

During 1955 the Service gave 49,977 days of care to 4653 patients, of whom 2918 were on the ward service. In the Pediatric Division of Vanderbilt Clinic the number of visits totaled 49,459, 6131 of them representing new patients. These figures constitute a 4.9 per cent increase in patient days' care, compared with 1954, and an 11.5 per cent increase in Pediatric Clinic visits.

The death on February 1 of Dr. Herbert B. Wilcox, former Attending Pediatrician and Director of the Pediatric Service, is recorded with a deep sense of loss and with renewed appreciation of his immense contribution to the Hospital. It was during his tenure of office and under his leadership that Babies Hospital became closely affiliated with Columbia University and with Presbyterian Hospital. His enthusiasm generated a conspicuous esprit de corps which enormously facilitated the task of his successor upon Dr. Wilcox's resignation from the attending staff; and his interest in the welfare of the Pediatric Service remained loyally active throughout his life.

Dr. Alfred G. Langmann and Dr. Edward J. Donovan reached retirement age in the course of the year. Both have served the Hospital faithfully over a long span of years, the former as Attending Pediatrician and chief of the Pediatric Cardiac Clinic, the latter as Attending Surgeon. Their experience and judgment have left a lasting imprint on their successors.

Dr. Harold T. Fuerst and Dr. Virginia Van Geyt resigned as Assistant Pediatricians, the latter to become a medical missionary in India.

A number of new members were appointed to the Attending Staff during the year.

Dr. Sidney Blumenthal, Assistant Attending Pediatrician, assumed directorship of the Pediatric Cardiac Clinic. He set out to attain a closer integration of in-patient and out-patient services for care of patients with heart disease of any form, whether of rheumatic or developmental origin, and to encourage greater use of newer diagnostic methods of modern cardiology available at the Medical Center. In this he was ably assisted by Dr. Sylvia P. Griffiths and others and enjoyed full cooperation from other clinical departments, notably the Medical and Surgical Services and the Services of Anesthesiology and Radiology. Even within a comparatively short time, results were apparent, and increasing concern with the

problems of pediatric cardiology was demonstrated in a variety of ways all of them destined to improve the care of patients.

Through the excellent cooperation of Dr. H. Houston Merritt Dr. Sidney Carter and others in the Neurology Service, patients on the Pediatric Service suffering from neurological conditions received the benefit not only of consultation on an ad hoc basis, but also of continuing advisory supervision wherever the clinical situation required it. Assignment of a member of the pediatric resident staff to regular duty with the neurological team for a two months' period provided a valuable addition to the educational program of the pediatric house staff and, in addition, helped to promote close liaison between the two groups.

Closer integration was attained between the Psychiatric Service and the Pediatric Psychiatric Clinic under Dr. William S. Langford, its director. This process continues at several levels. Three members of the staff of the Columbia Psychoanalytic Clinic for Training were appointed to the pediatric clinical staff, allowing them to supervise students in training during work with patients in the Pediatric Psychiatric Clinic. Since the autumn, selected members of the student body of the Psychoanalytic Clinic have been seeing children in the Pediatric Psychiatric Clinic as part of their didactic experience. Similarly, the general Pediatric Division of Vanderbilt Clinic has since the autumn months enjoyed the participation of two members of the Psychiatric Service's resident staff as consultants in problems involving emotional or behavioral disturbance. Dr. Virginia N. Wilking, of the Pediatric Psychiatric Clinic, joined actively in the work of the Seizure Clinic, under the Neurological Service, and also in that of the Cerebral Palsy Clinic, thus again providing an important liaison between services as well as offering the benefit of special skills.

On November 6, Babies Hospital featured in the CBS television program: Let's Take a Trip. In the half-hour show two children—played by professional actors—were invited to visit a pediatric hospital to find out whether it is really the frightening place it is often alleged to be, chiefly by apprehensive parents or other children who have never spent a night in a hospital. Guided by Dr. Langford, the children explored one of the wards and an operating room, inspected some of the equipment used in surgery and anesthesia, learned something of the educational and recreational facilities available to in-patients, and met and quizzed actual patients and their parents. The program brought the needs of the voluntary hospitals to the television public and effectively showed that a pediatric hospital can be and is a friendly place.

Dr. Hattie E. Alexander, on sabbatical leave during the second half of the year, visited several laboratories of microbiology in New York,

California and Colorado. Research projects which she organized progress under the guidance of Dr. Isabel Morgan Mountain, Dr. Katherine Sprunt and Miss Grace Leidy. The role of non-viable chemical substances in determining the heritable characteristics of both bacteria and filterable viruses constitutes the focal point of several interrelated investigative projects. With the collaboration of Dr. Douglas S. Damrosch and Dr. Saul Blatman, studies are being carried out to evaluate the effect of different regimens involving the use of drugs in the treatment of tuberculosis in infancy and childhood. Results of these studies were communicated through symposia held under the several auspices of the New York Academy of Sciences, the American Pediatric Society, the University of Colorado, the National Jewish Hospital for Tuberculosis, California Institute of Technology, the Max Planck Institute for Virus Research in Tübingen, as well as through scientific periodicals.

The fetal life study went forward with renewed impetus under the guidance of Dr. Rose G. Ames. Initiated to explore the effect of infections and other clinical incidents of pregnancy on the fate of the unborn child, this project has proved an invaluable source of reliable data on the normal anatomy and physiology of infants. The search for malformations has of necessity led to a critical evaluation of the range of variation of normal dimensions and phenomena. Slowly but with the sureness of controlled observation, data are being assembled which will fill gaps in the background information of clinical pediatrics. Until this study was launched, the very existence of some of these gaps was not appreciated; yet there is strong indication that the potential value of the data as they are accumulated and analyzed will prove of progressively increasing practical importance. Gleanings from several aspects of the fetal life study provided material for the Béla Schick Lecture which Dr. Rustin McIntosh delivered at Mt. Sinai Hospital in November.

Dr. Dorothy H. Andersen's studies of the celiac syndrome continued with the collaboration of Dr. Paul H. Boyer and Dr. William A. Blanc. The genetic background of patients with celiac disease was explored, with the demonstration of a high incidence of digestive disturbances. Together with Dr. William A. Silverman, Dr. Andersen evaluated the alleged beneficial effect of very high humidity in the atmosphere to which premature infants are exposed during routine care, with the result that no such benefit could be proved.

Dr. Paul A. di Sant'Agnese joined with Dr. Blanc in studies of the clinical and anatomical involvement of the liver as a relatively frequent component of the protean disease, cystic fibrosis of the pancreas. Results of these investigations were presented before the Pediatric Section of the American Medical Association and also at a symposium on

fibrocystic disease of the pancreas, held at the University of Iowa. A highly promising study of the chemical composition of bodily secretions is going forward, through the collaboration of Dr. Zacharias Dische of the Department of Biochemistry in the College of Physicians and Surgeons. Chemical evidence of a peculiarity in mucopolysaccharide structure, already suggested by anatomical observations, is beginning to emerge.

Dr. Ruth C. Harris continued her studies of liver function in infancy by a wide variety of investigative techniques. In collaboration with Dr. J. Robert MacLean and Dr. Jerold F. Lucey of the pediatric resident staff, she explored the relationship of bilirubinemia in premature infants to the incidence of anatomically demonstrable brain injury, showing that if the concentration of bilirubin in the blood serum is the critical factor, then the premature infant is adversely affected by far lower pigment levels than is the mature infant. The return of Dr. Melvin M. Grumbach as a member of the full-time staff, after some years of special study in pediatric endocrinology under Dr. Lawson Wilkins at Johns Hopkins Hospital, promises increased biochemical research activity as soon as a laboratory can be suitably equipped for steroid studies.

Dr. Conrad M. Riley and Dr. Ruth Alice Davis analyzed the pooled results of steroid hormone treatment of nephrosis submitted by more than 20 clinics from various regions of this country and Canada and involving some 1300 cases. Statistical analysis supports the hypothesis that proper use of these agents results in actual prolongation of life, as well as in the amelioration of edema and other symptoms of the disease. The results of these studies were communicated to a national nephrosis conference in Boston, at a symposium on nephrosis held under the auspices of the New York Academy of Sciences, and at the combined British, Canadian and American pediatric societies' meeting held in Quebec. Continued intensive study of the syndrome, familial dysautonomia, particularly of its psychodynamic repercussions within family units, brought a clearer understanding of the problem and helped parents in the practical aspects of management. Group meetings of parents, held at the Hospital approximately one evening a month and designed to permit them to discuss their mutual problems and tap the strength of unity through a common concern, constituted a rewarding venture in experimental therapeutics.

In the premature unit, Dr. Silverman subjected to controlled critical analysis a number of hypotheses regarding routine care which were offered to the pediatric profession as advances without adequate evidence to support them. Recommended procedures which were proved unworthy included exposure of the infant to ambient air of exceptionally high humidity, administration by aerosol—that is, in highly dispersed droplet

form, or actual mist—of a chemical containing a wetting agent, and administration of certain sulfonamide drugs for prevention of bacterial infections. Each of these studies required a carefully planned program to insure selection of patients without bias, consistent application of the experimental as well as the control regimen, and at the end unbiased analysis of results. The fact that most of these studies have thus far produced negative answers does not detract in the least from their value as contributions to rational, as well as effective, therapy. Throughout the program Dr. Silverman received the closest possible cooperation from Dr. John W. Fertig, Professor of Biostatistics in the School of Public Health.

A number of distinguished visitors, from various parts of the United States and from 16 foreign countries, attended conferences or addressed meetings of the pediatric staff.

Dr. Alexander serves on the council of the American Pediatric Society and Dr. Langford is President-Elect of the American Academy of Child Psychiatry and Treasurer of the American Orthopsychiatric Association.

Physical Medicine and Rehabilitation

ROBERT C. DARLING, M.D., Director

The lengthy name of this Service has at least the value of emphasizing its double function. In a general hospital, its first duty, traditionally, is to give professionally directed therapeutic services as required. The quality of such services improves as the technical procedures are better understood through research, and as more and better trained physicians are available to direct them. At the same time, there arises the need for consultative services in rehabilitation which can aid the referring service in comprehensive planning for the severely disabled patient and in utilizing full community facilities. Such consultation services are increasing, but cannot achieve their maximal usefulness until it is possible to organize a small in-patient rehabilitation bed service. Patients needing these beds are not yet ready for the outside rehabilitation center; they need frequent consultation with the many services of a general hospital, yet they do not logically fall under the responsibility of any traditional medical service.

More coordinated treatment for patients on the Orthopedic Service was achieved by regular resident coverage and periodic rounds by the therapist and physician staffs led by Dr. William Benham Snow.

The chief new therapeutic tool explored in the past year was ultrasound. Although not yet available for routine use, investigation in the laboratory and clinic indicates that it has a real place among therapeutic tools, particularly in the relief of the discomfort of painful scars and muscles. The therapists received a thorough series of lectures on the theory and practice of ultrasound by Dr. Milos J. Lota, preparatory to its more widespread use.

The Institute for the Crippled and Disabled continues to collaborate in services to patients and professional staff of the Hospital. The Prosthetic and Orthopedic Appliance Shop of the Institute handles an increasing percentage of the prosthetic and brace problems at the Hospital. Notable progress was made in solving some of the complex problems of prostheses for surgical patients after hemipelvectomy. Miss Blanche Talmud, chief physical therapist at the Institute, conducted a teaching exercise on crutch techniques for the therapist staff of the Hospital. Increased collaborative activity is being promoted by a newly organized committee concerned with the affiliation of the Hospital, the Institute and Columbia University.

Dr. Shyh Jong Yue and Dr. Robert C. Darling are continuing their study of rest. So far, studies are in a laboratory phase on normal subjects, to determine the form and duration of rest most suited for prompt recovery from strenuous exercise.

The research of Dr. Lota on the effect of ultrasound on the permeability of the red blood cell was published. Dr. Lota is investigating clinically the effect of ultrasound on painful scars, and, in collaboration with Professor L. Laszlo Schwartz of the Dental School, on painful spastic jaw muscles.

Dr. Snow was appointed a member of the American Registry of Physical Therapists. He participated in panel discussions at the annual meeting of the American Congress of Physical Medicine and Rehabilitation and at the meeting of the Eastern Section of the same organization.

Dr. A. David Gurewitsch was a United States delegate to the World Federation of United Nations Associations held in Bangkok in August. In the course of his travels, he lectured on medical rehabilitation at the medical schools in Hong Kong and Tokyo.

Dr. Morton Hoberman completed his term as President of the New York Society of Physical Medicine and Rehabilitation in June. He is Chairman of the Committee on Braces, Splints and Prostheses of the American Congress of Physical Medicine and Rehabilitation. In connection with his important work at the New York State Rehabilitation Hospital at West Haverstraw, he is studying the evaluation of drugs for progressive muscular dystrophy and of various procedures in cerebral palsy.

Dr. Yue presented a paper on Arthroplasty of the Hip, its Pre- and Post-operative Management, before the New York Society of Physical Medicine and Rehabilitation. This paper, presented as an essay, won for him the annual essay award of the American Congress of Physical Medicine and Rehabilitation.

Dr. Edward E. Gordon completed his research on energy cost of ambulation in paraplegics at the Institute and presented a paper on this subject before the American Congress of Physical Medicine and Rehabilitation. On October 1, Dr. Gordon resigned his positions as Director of the Medical Service at the Institute for the Crippled and Disabled and Associate Attending Physician in Vanderbilt Clinic, to assume directorship of Physical Medicine and Rehabilitation at Michael Reese Hospital in Chicago. His position at the Institute is being assumed on a part-time basis by Dr. Gurewitsch, who will add to his responsibilities at the Medical Center, thus facilitating collaboration between the Center and the Institute.

During the year, 46,623 patient visits were made to the physical and occupational therapy services. The total number of treatments given was 166,466, of which 23 per cent were to private and semi-private patients, 22 per cent to ward patients and 55 per cent to clinic patients.

Psychiatry

LAWRENCE C. KOLB, M.D., Director

The establishment of four residency positions in psychiatry in the Presbyterian Hospital on the recommendation of the Board of Trustees represents the outstanding development in the Service during 1955. With the approval of the Medical Board, a three-year psychiatric residency training program was arranged in collaboration with the New York State Psychiatric Institute. The psychiatric resident will thereby have the opportunity of experience not only in the services within the Presbyterian Hospital, but also on the in-patient services at the Neurological Institute and on various services of the Psychiatric Institute. During the first year he is expected to serve quarterly periods on the in- and out-patient psychiatric services of the Hospital, in the Neurological Institute, and on the acute service of the Psychiatric Institute. At the end of this year the resident will transfer to the Psychiatric Institute, where he may develop skill in the various somato-therapies and in the long-term intensive care of severe psychoneurotic and psychotic states, as well as obtaining experience in child psychiatry. In the final year of the residency training program, an opportunity for teaching and major clinical responsibility is provided each trainee in the position of Senior Resident on one of the several services in the Presbyterian Hospital and the Psychiatric Institute.

It is believed that the much-needed broad exposure to a variety of clinical psychiatric problems may be gained by the psychiatric resident through this collaborative training venture. Yet at the same time he will be able to get the important experience of long-term observation and treatment conducted under the skilled supervision of the Attending Staff. With the various postgraduate courses and seminars, the availability of training in psychoanalysis in the later years, as well as the continuing contact with other specialties, it is hoped that each resident will obtain a unique and significant experience in preparation for his future career, whether his interests are in practice, teaching or research.

Further evolution of the Service occurred prior to the appointment on July 1 of the resident staff. A nucleus of the Psychiatric Service, started in the spring of 1953 by Dr. Nolan D. C. Lewis, was completed early in the year when the bulk of the staff, still registered under the Department of Medicine, was transferred to this Service. Dr. Charles Moffett, who was brought on as a half-time assistant on January 1, ably supervised the consultative services in the Hospital, helped develop plans for the

residency training program and taught medical students. On July 1 Dr. Moffett relinquished this position. Dr. Robert Senescu succeeded him to expand, organize and arrange for the supervision of the consultative and therapeutic services performed by the resident staff. Dr. Senescu also assumed responsibility for supervision of the residents' activities in the Psychiatric Out-Patient Department of the Vanderbilt Clinic.

In October, he began to organize a committee to review and define therapy of patients referred from the various facilities of the expanded Psychiatric Service and also direct them to the appropriate division of the Service for treatment. Constituted to represent each clinical psychiatric division of the Medical Center, the committee includes Dr. Robert Campbell of the Psychiatric Institute, Dr. Edward Tauber, Miss Claire Johnson, psychiatric social worker in the Out-Patient Department, and Dr. Lawrence Kolb. Miss Barbara Kohlsaat, in charge of the social work department of the Neurological Institute, attended. The committee is expected to provide a teaching experience for resident staff in deciding on therapy for individual patients, to facilitate the therapeutic services of patients to be treated by the Psychiatric Service, and define and supervise the treatment to be given by resident staff.

The Executive Committee of the Department of Psychiatry of the College of Physicians and Surgeons, whose task is to integrate psychiatric practice, teaching and research activities within the Medical Center, suffered a loss in the retirement of Dr. Sandor Rado, Director of the Columbia Psychoanalytic Clinic for Training and Research. Dr. Abraham Kardiner, the new Director of the Clinic, succeeded him on the committee.

In recognition of Dr. Senescu's splendid work and also to bring about a closer liaison between the out-patient and in-patient facilities of the Service, the Executive Committee recommended his appointment as Assistant Director of both facilities.

The Service was pleased to welcome to its staff Drs. Bernard L. Pacella and Albert A. Rosner from the Neurology Service. Dr. Seymour C. Post, who finished a tour of duty with the Public Health Service of the Department of Health, Education and Welfare during the year, assisted in the supervision of the residents during the latter part of August. Dr. Post had previously been associated with the Department of Psychiatry, Vanderbilt Clinic. Dr. Max Cohen completed his military service in April and joined the staff. Dr. Jean Jameson, who cooperated in our undergraduate teaching program for several years, will join the supervisory staff for residents.

Regular treatment and teaching rounds are now held on Tuesday mornings between 9 and 11, rotating every three months between Drs.

George E. Daniels, Kenneth Kelley and Kolb.

The in-patient consultations provided by the Service in the first half of 1955 increased threefold over those of 1953 and 1954. The number continued to mount from July 1, when the new residency program was initiated and offered consultations for the Hospital as a whole. The Service saw 161 in-patients in 1953, 222 in 1954, and 595 in 1955. The bulk of requests came from the Medical Service, with the Neurological Service and Admitting Emergency following in that order. The resident staff provided brief psychotherapy to an increasing number of in-patients since they reported for service, ranging from several to a dozen therapeutic sessions in various instances.

In keeping with the expansion of the Service's work, arrangements are under way for a new suite of offices on the east medical wing on the eighth floor of the Hospital, which, it is hoped, will be available early in 1956. The suite will include three interview rooms. Two of the adjoining offices will be equipped with one-way screen and sound apparatus for the observation of interview techniques and for use in psycho-physiological research, as in the ninth floor office which the Service relinquished to the new Metabolism Unit. A third office will also serve as a library and special treatment room. The Service is indebted to Dr. Robert Loeb and the Planning Committee for their support and interest in the development of this much-needed space.

Drs. Aaron Karush and John O'Connor continued to see patients in the combined ulcerative colitis clinic with Drs. Charles Flood, Michael Lepore and John Prudden. Dr. Senescu joined the Clinic on July 1 to review the course of a group of treated ulcerative colitis patients referred over the last few years to the Psychosomatic Clinic. It is hoped that his work may become part of a larger study of the history of this illness derived from the series of patients followed conjointly by the Services of Medicine, Surgery and Psychiatry since the establishment of the Clinic in 1950.

Dr. Joseph Lubart served as psychiatric consultant to the Thyroid Clinic. At the suggestion of Dr. Sidney Werner, he examined a group of non-toxic goiter patients, providing to them brief psychotherapy when indicated. The data derived may well form the basis for a research project of emotional factors in this ailment.

Dr. O'Connor is reviewing the hospital records of all patients with lupus erythematosus. During the year he followed all those admitted to the Hospital in an attempt to evaluate the factors contributing to psychotic manifestations in the course of the illness.

Dr. Leon Moses is continuing his long-term psychoanalytic and ballisto-cardiographic studies of patients in sustained and transient hyper-

tension. He is now working with Dr. Edmund Goodman on the problem of instrumentation for a similar investigation of patients with duodenal ulcer.

Dr. B. Ruth Easser continued her work until June of 1955 with the Obstetrical and Gynecological Service on attitudes toward pregnancy and their effect upon labor, delivery, and subsequent motherhood.

Dr. Lothar Gidro-Frank and Miss Thelma Gordon are investigating the influence of emotional factors in pelvic pain. This work is now continuing with attempts to measure the physiological blood flow during psychiatric interviews.

Dr. Viola W. Bernard continued her many welfare, educational and scientific activities. She served as Chairman of the Committee on Social Issues of the Group for the Advancement of Psychiatry, was a member of the Professional Advisory Committee of the New York City Board of Education, and Chairman of the Mental Health Section of the Citizens Committee for Children of New York City. She testified at the Joint Legislative Committee on Mental Retardation of the State of New York at the public hearing in November.

Dr. Moses addressed the staff at the National Institute of Mental Health in Washington on psychosomatic research methodology. Dr. Kelley continued to serve as Treasurer and on the Board of Directors of the New York Psychoanalytic Society.

Dr. Karush was elected the representative to the Executive Council of the American Psychoanalytic Association from the Association for Psychoanalytic Medicine for 1955-57. He is also a member of the Professional Advisory Committee of the Manhattan Society for Mental Health.

During the year Dr. Kolb was appointed a member of the Advisory Panel on Medical Sciences to the Assistant Secretary of Defense, and Chairman of the Ad Hoc Committee on Relations to Medical Schools of the American Psychoanalytic Association.

In the Vanderbilt Clinic 52 psychiatrists attended throughout the year. Of these, five were assigned to the group clinic during the first six months and two covered the regular and group clinic for a period. After the initiation of the resident training program, three of the senior residents took over the assignment at the group clinic for three afternoons each week. One psychiatrist attended the regular clinic three times a week, three psychiatrists and a psychologist twice a week, 44 psychiatrists once a week and four psychiatrists once every other week.

Dr. Robert B. McGraw served as psychiatric representative on the newly-established committee to study and review patients recommended for therapeutic abortion in the Hospital. Dr. I. H. MacKinnon was the alternate. Dr. McGraw has served as chairman of the session on legal medicine at the New York State Medical Society.

Dr. Roy Craig continues his interest and investigations on myotonia congenita and alcoholism. Dr. Lawson G. Lowrey served as co-chairman of a committee on research of the American Orthopsychiatric Association. He also served on the Program Committee and Committee on Promotion, Publication and Finance of the same Association. He is presently a member of the Budget Committee of the American Psychiatric Association.

Dr. Milton Mazer is co-editor of An Outline of Psychoanalysis, recently published by Random House. Dr. J.A.M. Meerloo had the book, The Two Faces of Man, published by International University Press.

Dr. Hugh Mullan was elected President of the American Group Psychotherapy Association. He assisted in the formation of the Association for Group Psychoanalysis, which has as its aim intensive training in group psychotherapy to qualified individual therapists.

Dr. John F. Oliven continued his interest in the study of the suicidal risk and during the year his book, Sexual Hygiene and Pathology: A Manual for the Physician, was published by J. B. Lippincott Company. A portion of the clinical work and observations reported in this volume took place at Vanderbilt Clinic and through consultation services on the wards of Presbyterian Hospital.

During 1955, 515 patients made 3763 visits to the Psychiatric Clinic; of these 443 were new patients (116 referred from the Admitting Department of the Vanderbilt Clinic, 244 referred from other Vanderbilt Clinic and Presbyterian Hospital departments, 42 from local medical doctors, and 41 from outside agencies).

At the Babies Hospital, Dr. Virginia Wilking devoted half time to the Seizure Clinic and half a day a week to the Cerebral Palsy Clinic. In the fall, Dr. N. W. Ackerman, Dr. W. Goldfarb and Dr. J. D. Jameson received clinic appointments to assist supervising the training of students of the Columbia Psychoanalytic Clinic for Training and Research. Students of this teaching group started to attend the clinic.

Two residents of the Child Psychiatric Service of the Psychiatric Institute were assigned to the Pediatric Psychiatric Clinic for an afternoon a week each. Their work represents a renewal of a service originally performed some years ago by regular members of the clinic staff and discontinued due to pressure of other responsibilities. They again demonstrated the usefulness of such a service and it is hoped it can be continued into the future.

Dr. William S. Langford and Dr. Wilking continued their studies on the reactions of children and their families to physical illness. At the moment the staff is engaged in the study of young adolescent girls suffering from anorexia nervosa.

Dr. Langford is President-Elect of the American Academy of Child Psychiatry and is a member of the Study Group on Public Health Aspects of Childhood Accidents of the American Public Health Association's Committee on Administrative Practice.

During 1955, 247 patients were referred to the Pediatric Psychiatric Clinic for consultation and treatment. Of these, 75 came from the Hospital wards and 172 from the out-patient departments. Psychological tests carried out by the clinical psychologist on children from the Pediatric Service and from those being seen in the Clinic numbered 290.

Members of the Service again contributed broadly to professional literature, the activities of various professional organizations and to public education. In addition to books published, nine papers appeared in scientific journals and some 30 scientific addresses were made. There were five radio and two television appearances, and participation in numerous panel discussions and other teaching courses outside the Medical Center.

Radiology

HAROLD W. JACOX, M.D., Acting Director

The Service counted the opening of the Betatron as one of its most important advances during 1955, while continuing to operate at a high level of work and efficiency in all divisions.

A biplane fluoroscope was installed in the otolaryngology operating room suite to aid in the removal of foreign bodies from the respiratory and esophageal passages. A 70 mm. photofluorographic chest survey unit for the detection of early tuberculous lesions was placed on the first floor of the Vanderbilt Clinic. The work of this unit was integrated with that of the State and City Health Departments.

The Service had the most complete staff of radiologists since before World War II. The turnover in professional and non-professional staff was low compared with recent years.

Miss Ann Piper, chief technician on the third floor, retired after 32 years of service. Dr. Robert G. Bogen resigned as Assistant Radiologist to enter military service. Dr. Julian Mandell, Assistant Radiologist, resigned to enter private practice in Perth Amboy, New Jersey. Dr. Robert H. Freiberger, Assistant Radiologist, resigned to join the staff of the Hospital for Special Surgery. Dr. Joan Eliasoph, Assistant Radiologist, resigned to enter private practice in Stamford, Connecticut.

Drs. Cecil F. Baxter and Daniel D. Douglass, Visiting Fellows, were awarded one year clinical fellowships by the American Cancer Society. After completing two years' training with the Public Health Service Hospital, Staten Island, Dr. Andrew W. Koch was awarded a fellowship here for one year. Dr. Steven E. Ross was awarded a one year research fellowship by the James Picker Foundation under the direction of Dr. John Caffey. Dr. Bekir S. Izmirli, member of the Medical Corps of the Turkish Army, was a Visiting Fellow for six months.

Dr. Harold W. Jacox continued to serve on the Executive Committee of the New York Roentgen Society and on the Radiological Coordinating Committee of the New York County Medical Society.

Dr. Jacox and Dr. C. Zent Garber, Associate Attending Orthopedic Pathologist, are collaborating on a study of the effects of radiation on bone. Dr. Jacox continued as an abstractor for Excerpta Medica, editorial consultant to the journal, Radiology, and co-editor, with Dr. Morton M. Kligerman, of the Radiation Therapy Section of the Year Book of Radiology. He continued duties as Senior Consultant in Radiation Therapy to the Veter-

ans Administration and Consultant in Radiology to the Surgeon General of the Army. He was made an honorary member of the Flint (Michigan) Academy of Surgery and of the Detroit Roentgen Ray and Radium Society, and Radiologic Consultant to the American Council of Learned Societies for its Dictionary of American Biography. He participated in the Conference of Teachers of Radiology held in Chicago, sponsored by the American College of Radiology, in the Eastern Conference of Radiologists held in Boston, and in the Fifth Inter-American Congress of Radiology in Washington, as well as the meeting of the Radiological Society of North America in Chicago.

Dr. Caffey, Attending Radiologist, reported that the operation of the Babies X-ray Unit improved greatly during the year with the addition of a third technician and the new policy of permitting overtime operation when the load of work demanded it. As a result, delays in scheduling examinations disappeared and the number of examinations increased by more than 40 per cent.

The largest investigative project in Babies X-ray Unit concerns the radiologic examination of several thousand unselected newly born infants, in conjunction with the clinical study of the fate of the fetus in several thousand pregnancies. Already this study has yielded valuable data on some of the roentgen features of the normal infant, which will probably become the accepted standard in radiologic diagnosis. A paper on the normal acetabular angles during early infancy is now in press. This material promises to improve the accuracy of diagnosis in the earliest phases of congenital dislocation of the hip. Dr. Caffey completed two manuscripts: one in conjunction with Dr. Ross on the pelvic changes in mongoloid deficiency during early infancy; and a second in conjunction with Dr. Samuel H. Madell, Assistant Radiologist, on ossification of the pubic bones at birth.

Dr. Ross is devoting one year here to the study of the infantile pelvis. He has already completed studies on the ischiopubic synchondrosis during growth.

Dr. Caffey gave the Annual H. G. Weiskotten Lecture at Syracuse University and the first Annual Lecture in Radiology at the University of North Carolina, Chapel Hill. He also addressed the Fifth Inter-American Congress on Radiology in Washington. The December meeting of the New York Roentgen Ray Society was devoted to radiology of the growing pelvis; all of this material was derived from radiologic studies in the Babies Hospital.

Dr. Josephine Wells, Assistant Attending Radiologist, was one of the authors of a Cardiology Notebook which was compiled by the Cardiovascular Teaching Committee, on which Dr. Wells served until October, 1955. In collaboration with Dr. Baruch S. Blumberg, former Assistant Phy-

sician, Dr. Wells made a study of Marie-Strumpell arthritis, which was presented by Dr. Blumberg at the New York Academy of Medicine and at the American Rheumatism Association meeting in Atlantic City. She continues to hold radiologic conferences for the Faulkner Arthritis Clinic, and is making a survey of a large number of gastrointestinal series done more than five years ago to determine accuracy of the method.

Dr. Francis M. Cummins, Assistant Radiologist, is now serving as the X-ray representative on the Cardiovascular Teaching Committee. Dr. Ralph Schlaeger, Assistant Radiologist, participated in a program on the use of intravenous cholangiography at two meetings of the Gastroenterology Society, and at the American Medical Association meeting in Atlantic City. He is making a study on the evaluation of intravenous cholecysto-cholangiography including infants and children.

Dr. Russell Wigh, Assistant Attending Radiologist, is making a study of the effect of scleroderma on the colon with Dr. Philip M. Johnson, Assistant Resident; on extraluminal soft tissue shadows associated with the esophagus with Dr. Ezekiel Freed, Assistant Resident, and on the characteristics of metastatic carcinoma to the large bowel with Dr. Norah duV. Tapley, Assistant Radiologist. New pharmaceutical radiopaque contrast preparations were tested for use in intravenous urography. Studies to evaluate elcctrogastrographic tracings in detecting gastric cancer and in differentiating other conditions discovered by radiologic means are being worked out with Dr. Edmund N. Goodman, Assistant Attending Surgeon.

Dr. Gerhart S. Schwarz, Assistant Radiologist, is working on statistical analyses correlating roentgen cephalopelvimetry with actual obstetrical outcome and the roentgen diagnosis of disproportion with the clinical diagnosis. He developed a new method of orthometric radiography for obtaining highly accurate transverse pelvic dimensions, which was accepted for publication. A project involving the taking of rapid sequence radiographs in a study of innervation of the urinary tract from the urethra to the renal pelvis in animals was continued in collaboration with Dr. James B. Campbell, Assistant Attending Neurological Surgeon.

Dr. Donald J. Barnett, Assistant Radiologist, is working on a clinical study of craniopharyngioma. Dr. Jerome Nadelhaft, Assistant Radiologist, is working on a study of pancreatitis presenting radiologically as obstruction of the colon; a study of salivary gland tumors treated at Presbyterian Hospital; and, with Dr. Kent Ellis, Assistant Radiologist, a study of a series of normal neonatal chest roentgenograms. Dr. Nadelhaft and Dr. Robert Hochstim, Assistant Resident, are collaborating on a study of the differential uptake in liver tissue of radioactive iodinated human serum albumin in the diagnosis of metastases.

Dr. Kligerman, with Dr. Virginia Kneeland Frantz, Attending Sur-

gical Pathologist, is completing a study of carcinogenesis in the thyroid of the Long-Evans rat from external and internal radiation. He and Dr. Daniel Shapiro, Assistant Surgeon, are conducting an experiment on the effect of radiation and cytotoxine on tumors in mice. Dr. Kligerman participated as a consultant at a meeting of the U. S. Army Medical Service Graduate School on the effects of whole body radiation on man. He and Dr. Edith H. Quimby gave a course in rotation therapy at the Inter-American Congress and at the American Roentgen Ray Society meeting in Chicago. Together with Dr. Jacox, he revised Chapter XVI on Ionizing Radiation for the New York State Sanitary Code.

Dr. Juan M. Taveras, Assistant Attending Radiologist, Dr. Edward B. Schlesinger, Attending Neurological Surgeon, Dr. Harald H. Rossi and Dr. Quimby are working on the development of improved techniques in radioactive isotope localization of brain tumors. The problem here seems to be of two types: first, one must obtain a radioactive substance which concentrates more adequately in the tumor than has heretofore been possible, and secondly, the radiation detecting devices need considerable improvement. Several types of collimators are being tried for this purpose.

Dr. Taveras and Dr. Cummins are reviewing 1500 cerebral angiograms to determine the incidence and significance of junction dilation of the posterior communicating artery with the internal carotid artery because of its great importance in the surgical management of intracranial aneurysms. Dr. Taveras in collaboration with Dr. Catherine J. Dalton, Assistant Radiologist, is working on the myelographic aspects of venous and arteriovenous malformations of the spinal cord.

Plans for enlargement and complete renovation of the X-ray Department of the Neurological Institute are receiving consideration at the moment. Both the diagnostic and therapeutic facilities should be enlarged. Two radiotherapy machines are necessary with the present patient load and one of these machines should be of the supervoltage type.

The work of the radiological research laboratory continued along the lines described in previous reports. There are two separate activities: the research project for the Atomic Energy Commission, and problems allied with therapeutic radiology and with the medical uses of isotopes.

The research project for the Atomic Energy Commission operates under a contract between Columbia University and the AEC, and is under the direction of Dr. Gioacchino Failla. It consists of two parts: one concerned with radiologic physics and the other with radiobiology. The work is carried out by a considerable staff of scientists and technicians. These studies occupy most of the time of Dr. Roberts Rugh, and half that of Dr. Rossi. The work in radiologic physics involves the development of new methods of measuring (1) radioactive isotopes, and (2) tissue doses in terms of energy

absorbed per gram of tissue, under various conditions and for all forms of ionizing radiations. The work in radiobiology involves the study of the biological effects of ionizing radiation of particular interest to the AEC. They have issued a full report of work on the project as Document NYO-4642.

Physical aspects of radiotherapy problems claimed the attention of Dr. Rossi, and Miss Ginette Jacob, assistant physicist, worked closely with the clinical personnel in radiotherapy.

The Betatron installation was completed and tested in 1955 and a number of physical measurements undertaken to insure safety in the treatment of patients. Mr. Francis de Friess, physicist, devoted his entire time to the Betatron. The laboratories were furnished with some of the technical equipment necessary for the physics research that will have to be carried on continuously to improve conditions under which patients are exposed. A number of pieces of equipment were made in a machine shop established during the year, with Mr. Kenneth Meyer as full-time mechanic.

The first Betatron patient was treated on September 20. This was seen on the nation-wide television show, the March of Medicine. Another national telecast emphasized 60 years of progress since the discovery of X-rays by Professor Roentgen. Since its opening, Betatron operating time has been divided between clinical treatments and physical measurements.

A new technique was evolved by Drs. Kligerman and Madell, in conjunction with Dr. Rossi, in the treatment of superficial carcinoma of the palate. Yttrium-90, which emits high energy beta rays, was incorporated into molds of acrylic plastic designed to fit the individual patient. Equipment for accurate dosage determination was constructed and used. So far, two patients have been treated by this method.

Dr. Rossi was also interested in simplifying the problem of accurate localization of radium within the body. A simple piece of equipment was developed which permits a more rapid determination of the orthogonal projection required for dose computations.

Dr. Rossi is Chairman of the Subcommittee on Neutron Protection of the National Committee on Radiation Protection. He is a member of the Advisory Committtee of the Health Physics Division of the Oak Ridge National Laboratory, and of the Dosimetry Panel of the Radiation Research Society. He was the author of a chapter on Neutron Dosimetry in the Handbook of Radiation Dosimetry.

The radioisotope laboratory, under the direction of Dr. Quimby, continued to receive and standardize all radioactive isotopes of iodine, phosphorus, gold, sodium and potassium, and dispense them to clinical and research departments.

The Institutional General Authorization for the procurement of

radioisotopes continued in effect. About 90 applications were reviewed during 1955. Most of them were eventually approved, sometimes after modification of the original request. Both regular services and special cooperation with other groups on research projects continued. Reports from various services contain information about their projects involving radioactive isotopes.

Dr. Quimby continued her studies of radiation dosage problems. An exhibit on Isodose Calculation was presented at the Inter-American Congress of Radiology, held in Washington. Dr. Quimby is a member of the Advisory Committee on Isotope Distribution of the AEC, and of the Commission on Education of the American College of Radiology. She is also an examiner for the American Board of Radiology, a consultant for various medical groups, and on the editorial advisory boards of Radiology, Cancer, and GP. Dr. Quimby continues to give regularly scheduled courses in radiologic physics and in medical and biological uses of radioactive isotopes.

The residents in the Service continued to devote some time during their final year to work in the radiological research laboratory to become familiar with radioactive isotope procedures. Several of them established radioisotope laboratories in conjunction with their own practices after leaving this institution.

Dr. Failla continued to be active in work with the Atomic Energy Commission and other Government agencies, both military and civilian, on problems related to atomic energy. He is Chairman of the Advisory Committee for Biology and Medicine of the AEC, and consultant to several of the AEC installations. He is Chairman of the Radiation Instrument Panel of the Armed Forces Special Weapons Project, of the Dosimetry Panel of the Radiation Research Society, and of the Visiting Committee for the Medical Department of the Brookhaven National Laboratory. Dr. Failla is also a member of the International Commission on Radiological Units, the International Commission on Radiation Protection, the National Committee on Radiation Protection, and Chairman of subcommittees of the two protection organizations. He was a delegate to the Atoms for Peace Conference in Geneva in August, and presented a paper entitled Dosimetry of Ionizing Radiations.

Drs. Failla, Quimby, Rugh, and Rossi appeared on programs of national and local radiological, medical, physical and other societies, and gave a number of lectures to medical and lay audiences. Drs. Quimby and Rugh continued to be active in the radiological aspects of Civilian Defense. They participated in a Federal Regional Conference in Hartford in October.

All members of the Service participated in meetings of various professional societies and presented numerous papers which were published in clinical and scientific journals.

The following are Service statistics for 1955:

In the Harkness Pavilion diagnostic division there were 26,215 private patient visits, an increase of 1338 over 1954. In the third floor diagnostic division for ward and clinic patients, 54,977 patient visits were recorded, a decrease of 2818 from 1954, but there were 19,668 additional patient visits to the Chest Survey X-ray Unit.

At the Neurological Institute, 7491 patient visits were registered for diagnostic procedures, 708 less than in 1954. There were 1343 complicated operative procedures consisting of myelograms, pneumoencephalograms, ventriculograms and cerebral angiograms, a decrease of 156 from 1954.

At the Babies Hospital 11,104 patients were examined, an increase of 1723 over 1954. At the Squier Urological Clinic, 4711 patients were examined, an increase of 376 patients over 1954. At the Institute of Ophthalmology, 662 patients were examined, 5 more than 1954.

In summary, a total of 124,828 patient visits were made in 1955 for diagnostic services in the various divisions, compared with 105,244 in 1954, or an increase of 19,584.

In Radiotherapy, 6312 X-ray treatments were given to 625 private patients in Harkness Pavilion, a decrease of 253 from 1954; 504 follow-up visits were made, a decrease of 11 from 1954. In the Betatron, 183 treatments were given to 12 private patients; 460 treatments were given to 25 ward and clinic patients; 5208 treatments were given to 413 ward and clinic patients, a decrease of 35 from 1954; there were 2059 follow-up visits, an increase of 21. At the Neurological Institute there were 286 new patients, a decrease of 29 patients from 1954, and a total of 5649 patient visits, an increase of 40 from 1954. At the Institute of Ophthalmology, 75 new patients received 622 treatments. Radium treatments were given 108 times to 102 patients. Radioisotope treatments were received by 344 patients, and 2911 radioactive isotope diagnostic studies were made, 727 more procedures than last year.

A total of 18,542 treatments were given to 1538 patients, representing an increase of 421 treatments and a decrease of 56 patients.

Surgery

GEORGE H. HUMPHREYS II, M.D., Director

The changes in surgical practice over the recent years have placed an increasingly heavy burden upon operating room facilities, as well as upon the time and talents of the professional and nursing staffs. This has resulted more from the type of surgery being done than from an increase in the number of operative procedures, although the latter actually has increased until this year when, for the first time, little change occurred in comparison with previous years. The type of surgery being performed, however, is the result of improvements in techniques of anesthesia and the introduction of new time-consuming operations, especially in the fields of cardio-vascular surgery and cancer. The lengthening of the human life span also has been responsible to a greater degree than is often recognized, due to a growing awareness of the feasibility of operating electively upon "old" persons for many conditions hitherto thought prohibitively dangerous because of the patient's age. Some of the principal changes in the Surgical Service during the past year have been in the direction of distributing this increased load by utilizing the excellent facilities of associated services. This is one way in which the ward services can be better balanced. By utilizing the services at Presbyterian Hospital and Babies Hospital for training in the many and varied acute and elective procedures of general surgery, graded surgical training will be facilitated. The more specialized services then may be used for complex problems including long-term care.

This shift in organization answers some of the problems concerning the ward services, but it leaves unsolved the very pressing problem of the private patient. The proportion of private to ward operating remained steady, but the restriction of facilities determining time and space for the care of patients is as great as ever. There is no present solution for this problem. Increasing community demand for private care is reflected in the statistics of doctors' private practice offices. A major question at the moment, therefore, is the relationship of the practice of private medicine at the Medical Center to the basic objectives of the Medical Center itself. While not precisely relevant in a report of this sort, the implications of the impact of a growing private practice upon the ultimate character of a teaching service must not be disregarded. Never since the founding of the Medical Center has the need been so urgent as now for a clear statement or re-affirmation of the basic aims and purposes of this institution.

STAFF ACTIVITIES

At the Babies Hospital, Dr. Thomas V. Santulli was appointed Chief of Pediatric Surgery to replace Dr. Edward Donovan, who had held the post until his retirement on June 30. Prior to that, Dr. Santulli had been Chief of the Surgical Clinics in the Vanderbilt Clinic. He also heads the Pediatric Tumor Clinic, where, in collaboration with Dr. Dorothy Andersen, Associate Attending Pathologist, a study is being made of the natural history of angiomas.

Dr. David Ju joined the Plastic Service as an Assistant Attending Surgeon on July 1.

The Thoracic Services at the Presbyterian Hospital and at Bellevue have been drawn closer together by the appointment of Dr. Robert H. Wylie, Director of the Thoracic Surgery Division at Bellevue, as Chief of the Chest Service at Presbyterian. Adult thoracic cases have now been centralized in two five-bed wards as a sub-unit of the west service.

Dr. Charles W. Findlay, Jr. returned from a tour of military service during the year and was reinstated as Assistant Attending Surgeon. Dr. Grant Sanger was appointed Associate Attending Surgeon. Dr. Daniel Shapiro was appointed Assistant Surgeon, Presbyterian Hospital and Vanderbilt Clinic, following completion of his surgical residency on September 1.

Dr. Virginia Kneeland Frantz was on sabbatical leave of absence during the last half of the year. She took advantage of this time to complete histopathological studies on the pancreas for a fascicle of an Atlas on Tumor Pathology, published by the Armed Forces Institute of Pathology, and a clinical pathological review of thyroiditis.

Dr. Robert B. Hiatt remained on leave of absence as Director of Surgery of the Nemazee Hospital at Shiraz, Iran. It is expected that he will return to Presbyterian Hospital during the summer of 1956.

Dr. Frank Lamont Meleney retired on June 30, but continues the practice of surgery in Coral Gables, Florida. His contributions to medicine in the field of surgical infections were numerous and were largely made when the treatment of such infections constituted a major part of surgical practice. The laboratory of surgical bacteriology, which Dr. Meleney established in 1925 at the Presbyterian Hospital, has contributed outstandingly to the improved control of infection today. Appreciation of his contributions to medicine was reflected in the award of an honorary Doctor of Science degree from Dartmouth College in June, 1955.

Another member of the surgical staff to retire in 1955 was Dr. Edward J. Donovan, whose main professional interest was pediatric surgery. He graduated from the College of Physicians and Surgeons in 1920

and began his appointment as an Assistant Attending Surgeon in Babies Hospital in 1926. He became Chief of Pediatric Surgery in the Babies Hospital as an affiliated service in 1933, and continued in that position after its amalgamation as an integral part of the Surgical Service of Presbyterian Hospital in 1946. He served as President of the New York Surgical Society and in 1955 was chosen President of the New York Academy of Medicine.

Although Miss Margaret Eliot, who retired in June as Director of Nursing, was not recently a surgical head nurse, the Surgical Service likes to record that she was in charge of old Ward II under Dr. Hugh Auchincloss, then Chief of the Second Surgical Division of the Presbyterian Hospital. This and the fact that she was always considered a part of the Service are justification for mentioning Miss Eliot with those of its members who retired during the past year.

Miss Florence Harvey, who retired in April, is likewise claimed by Surgery, although technically she belonged to Social Service. The Surgical Service, however, has strong justification for including her in its annals, for it grew up with her as did many of its patients. Miss Harvey came to the Presbyterian Hospital in 1925 and was assigned to Surgery three and a half years later. She was in constant touch with the patient-care problems of the Service since that time in the Hospital, the Clinic and the homes of the people she helped.

SERVICE ACTIVITIES

The organization of a surgical society, bearing the name of Allen O. Whipple, was completed at Princeton on October 21 by a group of the residents he had trained while Director of Service at Presbyterian. The purpose of the Society is primarily to foster and improve the training of surgeons. One of Dr. Whipple's greatest interests lies in the accomplishment of this purpose. His former residents seek to perpetuate his ideals and encourage their realization not only among those who come to Presbyterian as members of the surgical house staff, but wherever surgical training is offered. Dr. Louis M. Rousselot was chosen the first President of the new Society.

A surgical alumni day scientific and operative program was arranged on April 15 in conjunction with the semi-annual Presbyterian Hospital alumni day activities. Papers were presented by these former members of the surgical house staff: Dr. John A. Gius, Professor of Surgery, University Hospitals, Iowa City; Dr. Theodore P. Eberhard, Clinical Professor of Radiology and Coordinator of Oncological Teaching at Jefferson Medical College, Philadelphia; Dr. Albert H. Levy, Chief of Surgery, Veterans Administration Hospital, East Orange; and Dr. Pelham

Glazier, Associate Professor of Surgery, Albany Medical College, Albany.

On January 27 members of the Gallie Club of Toronto were guests of the Surgical Service; on April 12 the Southern Society of Clinical Surgeons was entertained by the members of the Service; and on October 20 they were host to the Connecticut Society of American Board Surgeons. Operating programs and the presentation of studies currently being made in clinical and laboratory research were arranged for these groups.

On September 24 the members of the surgical staff and their families spent a pleasant day as guests of the staff of the Mary Imogene Bassett Hospital in Cooperstown, New York. A scientific program and social activities were thoughtfully arranged by the Cooperstown group, in whose homes most of the guests stayed.

Honors and distinctions were conferred upon members of the Service during the past year in addition to those already mentioned. Dr. Allen O. Whipple, Professor Emeritus and Surgical Consultant to the Presbyterian Hospital, was presented the Academy Award by the New York Academy of Medicine. He also received the first Evarts Graham Award for outstanding contributions to surgery and an honorary degree of Doctor of Science at the 94th commencement of Washington University in St. Louis.

Dr. Arthur Purdy Stout, Professor Emeritus and Consultant in Surgical Pathology to the Presbyterian Hospital, was made an Honorary Fellow of the American College of Surgeons, President of the Halsted Society, Vice-President of the Intersociety Cytological Council, Secretary of the New York City Cancer Committee and Chairman of the Sub-Committee on Oncology of the National Research Council. Dr. Stout continues to be very active teaching and collaborating with investigators and clinicians in the study of problems related to malignant disease.

Dr. George H. Humphreys, II, was elected Vice-President of the Medical Board of the Presbyterian Hospital. Dr. Raffaele Lattes was appointed a consultant in surgical pathology to the Armed Forces Institute of Pathology at Washington. Dr. Wylie was elected to the American Board of Thoracic Surgery. Dr. Ralph A. Deterling was elected to the position of Recorder of the North American Chapter of the International Society of Angiology. Dr. David V. Habif was elected to the council of the New York Surgical Society. He was also appointed a member of the Publications Committee of the Society of University Surgeons.

Changes in house staff assignments and the concentration of patients undergoing thoracic surgery on the west Surgical Service probably affected patient care more than other changes during the year. With the increase in semi-private and private facilities, careful house-staff coverage became essential. This was accomplished by assignment of certain interns

and residents from the three surgical ward services to cover the private patients of attendings on corresponding services. A similar arrangement was also made in the operating room to provide assistants and at the same time leave surgeons free to care for house patients during the day and night. Although further modifications may be made, the arrangement has facilitated and improved the care of patients. Any change made in one direction, however, often produces adverse changes elsewhere. The attainment of perfect balance seems impossible.

The number of operations performed in 1955 was slightly fewer than in the preceding year. The character of the work is not reflected in these figures. Mention was made previously of the trend toward longer and more complex procedures during the past 15 years. Its importance to the problems arising in the practice of surgery cannot be over-emphasized. One of these is the admission and scheduling of patients for operation. This has a direct bearing upon patient care and the relationship between the hospital and the community it seeks to serve.

The comparative figures showing the number and types of operations performed in 1955 are summarized in the table which follows.

The recovery room, established four years ago, continued to give valuable service in patient care. This is particularly important in the special care made available to the increased numbers of patients undergoing the more serious and extensive types of surgical procedures now being performed. The effectiveness of the recovery room principle of nursing led to consideration of other group nursing arrangements, such as the one for surgical thoracic patients after operation. Figures for recovery room admissions are also included in the following table:

	1951	1952	1953	1954	1955
Total Operations (Surgical Service)	4,105	4,510	5,750	6,069	5,888
Per cent Ward Operations	53%	49%	48%	49%	49%
Adult Case Classification					
Thyroid	364	372	409	444	407
Head and Neck	184	231	350	372	396
Breast	328	374	434	506	487
Thorax	164	177	241	248	263
Gastro-Intestinal Tract	530	469	632	680	627
Appendix	203	139	216	212	208
Gall Bladder, Pancreas	341	277	424	501	449
Hernia	320	291	434	454	442
Other Celiotomy	309	335	413	372	393
Rectal and Perineal	307	309	429	450	331
Other, Superficial	675	853	893	913	863
Transfusions	13,537	13,474	12,729	11,698	11,245
Recovery Room (Admissions)	7,771*†	9,765*	10,823*	10,517*	9,260

* Include overnight census as admissions
† February to December

PLASTIC SURGERY

An experimental laboratory operating room was established by the plastic service under Dr. David Ju during the past year. Development of this approach to studying the problems of wound healing is not new in this field nor on this service. Dr. Ju's contributions to knowledge about the functions of lymphatic drainage and the physical principles of wound healing with reference to skin lines are well-known. Plastic surgery is generally thought of as almost exclusively a clinical field. Knowledge of fundamental principles of biological processes is, in fact, nowhere more important than in plastic surgery broadly considered. A concept of the breadth of this field is of first importance. Its province cuts across every field of surgery, particularly today when so much reconstructive surgery is necessary. Emphasis is not placed upon cosmetic results, popularly considered the objective of plastic surgery, but rather upon the restoration of function, whether in a damaged arm, leg or joint, implanting a segment of bowel or reconstructing a damaged esophagus. This is the true duty of the plastic surgeon, fulfillment of which is being sought by Dr. Thomas W. Stevenson, Jr., and the other members of his service.

Their activities during the year show the scope of their interests. Dr. Stevenson addressed the 29th Annual Clinical Congress of the Connecticut State Medical Society and the Yale University School of Medicine on the management of traumatic swellings, old and new; the Veterans Administration in San Juan on the surgical treatment of X-ray and thermal burns and the removal of cutaneous tumors; the Clinical Congress of the American College of Surgeons with Dr. F. M. Smith on the orthopedic problems concerned with combined injuries of the shoulder region and upper arm. He presented a moving picture and paper with Dr. Ju on a new concept of total ear reconstruction at the American Society of Plastic and Reconstructive Surgery meetings during the fall. Dr. Ju also presented a paper on tumors of the oral cavity and pharynx, which discussed the reconstruction of the extensive defects produced by their extirpation. Dr. George F. Crikelair, in collaboration with Dr. Dan H. Moore, is concerned with the problems of burns and burn shock in relation to hypothermia.

SURGICAL PATHOLOGY

During 1955 the study of diseased tissues and organs removed at operation included 6269 specimens and 657 frozen sections for immediate diagnosis in the operating room. This large clinical load, in addition to teaching assignments and investigative work, was carried by three full-time attendings and three resident surgical pathologists. During the year four postgraduate students worked full time in the laboratory of surgical pathology.

The close association between clinical surgery and the laboratories of surgical pathology continues and is reflected in the projects of the past year. Dr. Carl Feind, a surgical resident, completed a systematic study of cervical metastases to learn the normal and alternate pathways of lymph node spread of cancer. This study has a direct bearing upon the surgical treatment of malignant disease in that region. Dr. Robert Grinnell continued his studies of the distribution of metastases from carcinoma of the colon and rectum. He was engaged with Dr. Nathan Lane on a clinical and histological study of adenomatous polyps and papillary adenomas of the colon and rectum with particular reference to malignant degeneration of these tumors. He also published articles on squamous cell carcinoma of the anus and the treatment of tumors of the intestine.

Dr. Lattes was interested in a variety of surgical-pathological disorders, among them carcinoids of the gastro-intestinal tract, thymomas in adult patients, the pathology of breast cancer related to the various types of disease found in the mammary gland and in some of the fundamental processes in wound healing. Besides directing the routine and research activities of the laboratories, he gave lectures and papers to a number of groups at other institutions. With Dr. Harold Harvey of the Surgical Service, he gave a paper on the differential diagnosis of peptic ulcers at operation at the symposium on malignancies of the New York State Academy of General Practitioners. Dr. Lattes was appointed a consultant in surgical pathology to the Armed Forces Institute of Pathology in Washington.

It is obvious that in the surgical pathology laboratory, as elsewhere in the surgical laboratories, the preponderant interest is malignant disease, its clinical and histological manifestations, its natural history, behavior and the outcome of therapy. Certainly the collaboration between surgery and surgical pathology as a living, dynamic approach to the study of disease is a growing force against the advance of cancer.

BLOOD BANK

An interesting and significant trend has been apparent in the activities of the Blood Bank during the past few years. There were fewer whole blood transfusions given during 1955 than in the preceding year (9702 compared with 10,378). The overall total for the year, including red cells and plasma, also showed a drop from 11,698 for 1954 to 11,245.

It is becoming apparent that the transfusion of human blood is a benefit not without hazard, as has proved to be the case with almost every other innovation in the field of medicine. The practical result has been that operations have been performed with more concern for the conservation of intact patient blood or the use of blood substitutes which tend to maintain blood pressure without the production of deleterious side-effects.

The abandon with which transfusions were heretofore employed, as popularized by the armed forces in the recent war, is itself being abandoned in favor of a return to fundamental principles of surgery in which is stressed the importance of careful handling of tissues and careful hemostasis implemented and facilitated by expertly administered anesthesia. The recurring impact of these fundamental principles of surgical technique and practice cannot be overstressed.

SURGICAL CLINICS

The Surgical Follow-up Clinic supplements and implements the objectives of the Surgical Service. It provides continuing patient care, is the proving ground of surgical procedures, and gives us knowledge of the natural history of disease processes.

During the year there were 7227 patient visits. This is fewer than in preceding years for a number of reasons. Many follow-up visits of patients made when the clinic started were discontinued. Follow-up of large groups of appendectomies, hernias and gall bladder patients was also discontinued because studies on most of them, except specific groups, were of doubtful value. On the other hand, studies of other smaller groups of patients as clinical research projects were pursued with the utmost interest and value from the standpoint of the method of ultimate surgical therapy. These motivated the follow-up study of gastric cases by Dr. Harold Harvey in evaluating the methods of treating duodenal and gastric ulceration and gastric cancer. The surgical approach to the treatment of goiter was similarly evaluated by the results of surgical therapy over many years, combined with an analysis of the pathology of the glands removed. All breast pathology was intensively studied by Dr. Cushman D. Haagensen and Dr. Lattes in an effort to determine the natural course of benign and malignant disease processes and the possible correlations between the two. Other studies being pursued in the Follow-up Clinic are the incidence, types, and best methods of treatment of diaphragmatic hernia (Drs. Humphreys, Jose M. Ferrer, Jr., and Philip D. Wiedel); causes and best methods of treatment of ventral hernias (Dr. Edward L. Howes); the efficacy of treatment of congenital anomalies of the gastro-intestinal tract in children (Dr. Santulli); the tracheo-esophageal anomalies (Drs. Ferrer and E. B. Self); and the tumors of infancy and childhood (Drs. Santulli and Andersen). Members of the chest and vascular teams, headed by Dr. Humphreys, evaluate the results of surgical treatment of cardio-vascular anomalies of children and adults. Dr. Ferdinand McAllister, Dr. Deterling, Dr. Aaron Himmelstein and Dr. A. B. Voorhees, Jr. study the results of peripheral vascular surgery in replacements of segments of diseased blood vessels. The study of cirrhosis, Banti's

disease and the surgical treatment of these conditions by portacaval, splenorenal and other vascular shunting procedures, and the surgical treatment of aneurysms is carried out by Dr. Arthur H. Blakemore, Dr. Voorhees and others. In the chest clinic, Dr. Humphreys, Dr. Richmond L. Moore, Dr. Findlay, Dr. Wylie, Dr. Deterling and Dr. Himmelstein evaluate the effects of surgical treatment of cancer of the lung. Dr. Habif conducts a surgical follow-up clinic for the study and treatment of edema of the arm following radical mastectomy for cancer of the breast.

Clinics for teaching medical students and residents are conducted in the combined tumor clinic, proctology and surgical follow-up. The Proctology Clinic was transferred to the tenth floor of the Vanderbilt Clinic adjacent to the Gastro-intestinal Clinic, to correlate the teaching and treatment functions of these two special fields. The work of arranging all these important follow-up clinics falls upon Miss Gertrude Taylor and her associates.

RESEARCH ACTIVITIES

The laboratory of cell physiology, directed by Dr. Margaret Murray, continued collaborating with the laboratories of surgical pathology on determining diagnostic criteria for human neoplasms. Tissue culture methods were also employed by Dr. Mary S. Parshley in her study of methods of preservation of blood vessels and other human grafts. Closely related to this group is the laboratory of histochemistry, under the direction of Dr. Gabriel C. Godman who was elected this year to Sigma Xi, honorary scientific society. Most of the work of these laboratories is devoted to fundamental studies related to the etiology of cancer.

More directly related to the clinical phases of cancer therapy are the activities of the laboratory of cancer chemotherapy under the direction of Dr. Daniel Shapiro. For the past four years this laboratory has been investigating the multiple combinations of chemotherapeutic agents in the experimental treatment of cancer based upon the quantitative biochemical differences between normal and cancer tissues. A significant step forward was made during the past year in the in vivo demonstration that a six compound combination produces anti-tumor effects without increased toxicity. These changes were simultaneously coordinated with the effects of radiotherapy applied to experimental neoplasms, in collaboration with Dr. Morton M. Kligerman of the Service of Radiology. Dr. Shapiro was assisted in these studies by Dr. L. S. Dietrich of the Department of Biochemistry and Dr. Maurice E. Shilz, formerly of the School of Public Health. A number of papers were presented and published during the year by this group of investigators.

Research into the nature and isolation of the mouse mammary car-

cinoma factor found in mouse milk continued, but has so far eluded identification by use of the electron microscope. Other methods of isolation and identification are under investigation.

The activities of the surgical metabolism unit, under the supervision of Dr. Harold Barker, are closely related to patient care. Studies continued on fluid and electrolyte physiology in the early postoperative period and in patients with ascites secondary to cirrhosis of the liver. A study of the dynamics of the pleural fluid in man by tracer techniques was completed with Dr. Roy H. Clauss. Studies on the digestion and absorption of fat by tracer techniques and carbohydrate digestion by the response of blood glucose levels to a starch meal were made with Dr. James R. Malm and Dr. Keith Reemtsma, surgical residents.

Other surgical laboratories undertook various studies relating particularly to patient care. The surgical bacteriological laboratory studied the efficacy of neobacin in the preoperative sterilization of the alimentary tract and use as a local antibiotic agent in operative procedures and wounds. Miss Balbina Johnson, Research Associate in Surgery, Dr. Findlay and Dr. Habif investigated a possible change in pattern of resistance of "hospital staphylococci" in patients and staff following the general use of erythromycin therapy.

The enzymatic débridement of burns and the local chemistry of wound healing are being investigated in the laboratory of Dr. Howes. With the assistance of Dr. Ines Mandl, it was possible to prepare a very effective and relatively harmless enzyme which facilitates the rapid removal of slough from burns. The important role of the mucoproteins in the defense of the body against injury is being studied intensively.

Dr. John F. Prudden, with Dr. John B. Price, Jr., continued basic studies on the effects of endocrine products, particularly growth hormone and insulin, on convalescence. This is almost ready to be carried to the clinical level of investigation. With Dr. McAllister, an experimental method of surgical revascularization of the heart was investigated by Dr. Prudden using the intact lung.

With Dr. R. C. Britton, a surgical resident, and Mr. Howard Radwin, a fourth year student, a complete study of the results of the surgical treatment of ulcerative colitis was begun. It will be carried out in conjunction with a similar study of medical treatment by Dr. Charles Flood and Dr. Michael Lepore of the Medical Service. It is hoped that these parallel clinical investigations will help reach firm concepts of the indications and contra-indications for surgical forms of therapy in this difficult disease.

Dr. Deterling continued his long-term evaluation of aortic homografts, the use of homografts stored in excess of three years, experimental trials of various synthetic materials in aorta, peripheral arteries and great

veins; the study of and attempts to control aortic insufficiency; the study of methods of decontaminating clinical blood vessel homografts; and a study of replacement of the esophagus and trachea by synthetic materials and collagen tubes. In collaboration with the Service of Anesthesiology, experimental studies were conducted on the problems of cross-circulation with donor or reservoir and experimental and clinical studies on the use of hypothermia in surgical procedures.

In addition to his experimental work on revascularization of the heart, Dr. McAllister and a surgical resident, Dr. J. H. Jacobson, worked out a method for the controlled occlusion of the larger blood vessels. This was utilized experimentally to study the effects of various agents and drugs upon the treatment of vascular occlusion. These investigators are also doing some interesting work in the development of a mechanical sphincter clamp which may be embedded subcutaneously, releasing or closing the sphincter by pressure.

Experimental and developmental work on the use of various textile tubes as vascular prostheses progressed under the direction of Dr. Arthur H. Blakemore, in collaboration with Dr. Voorhees, Dr. Sanford G. Weissman and Dr. Britton, surgical residents.

Dr. Edmund Goodman continued his work on development of the electrogastrogram. Further refinements were made in technical aspects of the problem relating to types and placement of electrodes simultaneously with their localization by X-ray. Studies of quantitative electrical form also are being attempted. An unselected group of asymptomatic patients is being studied for long-term correlation with developing objective gastric pathology. Dr. Melvin Schwartz is making statistical analyses and interpreting data accumulated from the records obtained by the electrogastrogram.

SCIENTIFIC REPORTS

Numerous articles were published, papers presented and medical meetings attended by members of the surgical staff during the year.

A review by Dr. Meleney, entitled The Past 20 Years in the Management of Surgical Infections, appeared in the International Abstracts of Surgery. Dr. Meleney also wrote a chapter in the sixth edition of Christopher's Textbook of Surgery (in press) on surgical bacteriology, chemotherapy and antibiotic therapy. He contributed sections in the same book on infectious gangrene of the skin and subcutaneous tissue, chronic undermining ulcer and on tetanus. Dr. Blakemore contributed another chapter on the liver and biliary system.

Dr. Edward L. Howes wrote a chapter on healing for the second edition of Cole's Operative Technics in General Surgery (Appleton-Century-

Crofts, Inc., New York). Dr. Lawrence W. Sloan wrote several clinical sections in a new book, The Thyroid, edited by Dr. Sidney Werner of the Medical Service. Dr. Virginia Kneeland Frantz wrote the chapter on pathology of the thyroid in this volume.

Dr. Jerome P. Webster presented papers before the German Society for Maxillo-facial Surgery in Hamburg, and the First International Congress of Plastic Surgeons in Stockholm and Upsala. He continues his interest and research in the history of medicine. An article entitled, European Influences on Medicine in Colonial New York, was published in the New York State Journal of Medicine in April.

Dr. Humphreys, Dr. McAllister, Dr. Deterling and Dr. Wylie were all very active in research, teaching, lecturing and publishing articles on various aspects of cardio-vascular and pulmonary disorders treated by surgical methods. Every phase of this relatively new field of surgery is under investigation by this group of surgeons, collaborating with several members of the house staff and investigators from other laboratories in the Medical Center.

Dr. Robert H. E. Elliott, Jr., was chairman of the Columbia-Presbyterian Medical Society for the past two seasons, arranging and conducting the meetings of this combined group of medical students and teaching staff.

Enumeration of all of the interests and activities of the surgical staff is quite beyond the scope of this report. Much has been contributed to patient care and teaching which is never recorded. Nor is it possible to go into detail about the many projects which have required and received assistance from the Nursing Service and the Administration. One such item, which the Surgical Service deeply appreciates, is the new group of staff offices on the 12th floor stem made available for occupancy this year.

It seems quite obvious that, more than ever before, there has been a lively participation in the experimental and research aspects of surgery as a basis for better teaching and practice by members of the surgical staff without which surgery would become merely an exercise in techniques.

Urology

JOHN K. LATTIMER, M.D., Director

The J. Bentley Squier Urological Clinic at The Presbyterian Hospital exemplifies the growing importance of urology as one of the important surgical specialties. As modern medicine increases the life expectancy of the average person, more and more people are living to the age of prostatic obstruction, of malignancies of the prostate, bladder and kidneys, or to develop stones in the urinary tract. The Urological Service of this Hospital, founded by Dr. Squier, was among the nation's first such large and independent services and has accounted for many advances in this field.

During 1955, a major organizational change took place in the Service with the retirement of Dr. George Francis Cahill, its Director for the past 16 years. Dr. Cahill took over the work of Dr. Squier in 1939. During the period of his directorship, Dr. Cahill received practically every honor in the field of urology. In 1952 he became President of the American Urological Association and was President of the Ninth International Congress of Urologists. From 1944 to 1952 he was a Trustee and Examining Member of the American Board of Urology and in 1952 was the President of the Board. From 1949 to 1952 he was President of the Medical Board of The Presbyterian Hospital. During this period his fame as a urological surgeon spread throughout the world. His pioneering work on surgery of the adrenal glands attracted large numbers of patients to the Hospital. On one occasion, when a large series of the adrenal medullary tumors causing high blood pressure (pheochromocytomas) was reported at a national medical meeting, the remark was made that "only at The Presbyterian Hospital could such a series of cases be accumulated." Upon his retirement, testimonial dinners were given in Dr. Cahill's honor by the Trustees of Presbyterian Hospital, the Faculty of Columbia University and the Alumni of the Squier Urological Clinic. In addition, members of his department gave a party for him and presented him with a sum of money contributed by his friends. With a gesture so typical of his generous nature, he donated this toward an endowed bed in The Presbyterian Hospital for use by any employee of the Urological Service who might be unable to meet medical expenses. With the retirement of Dr. Cahill, Dr. John K. Lattimer was appointed to carry on the traditions of the Squier Urological Clinic.

Blueprints for the modernization of several units of the Clinic were drawn up. The addition of new bathrooms to the semi-private facilities was requested. Modernization of the cystoscopic department, with the addition of better facilities for the anesthesia department, is planned. Several individual cubicles are contemplated for the Squier X-ray department. During 1955 air conditioning equipment was installed in the cystoscopic department. A request was made for additional resident physicians to the Service to keep pace with the tremendous increase in consultations and radiological examinations they perform. The need for this increase in house staff is apparent when it is realized that consultations have tripled while the number of house officers has remained the same. Steps were initiated to expand the staff of the out-patient department.

The general organization of the Service remains as before. It has its own X-ray unit, specializing in urological X-ray techniques, its own out-patient department and pathology section, all run by dedicated personnel, who carry on the traditions of one of the best-known services in the country.

Dr. Meyer M. Melicow is one of the few urologists who has devoted himself to the study of the pathology of the genito-urinary system. Some of his terms, such as "urothelium" to describe epithelium lining the genito-urinary tract, have now become standard nomenclature. In October, he published a comprehensive report on cancer of the bladder in the Journal of Urology, with a classification and summary of the results of treatment at this Hospital. One of the interesting facts to emerge from this work is that small malignant foci are frequently present on the portion of the bladder wall appearing normal to the naked eye. These are additional to the large cancers which attract attention to the patient. Dr. Melicow reported and gave a scientific exhibit on pheochromocytoma at the meeting of the American Medical Association in Boston in November. He summarized the findings of 40 cases of this rare tumor. The growth of Dr. Melicow's work in uropathology to national and international stature has been a source of great satisfaction to the members of the Urological Service.

Dr. Marcel Goldenberg, of the Medical Service, working in conjunction with the Urological Service, devised a new and practical test for diagnosing tumors of the adrenal gland which may cause high blood pressure. It is called the Urinary Catecholamine Test and has proved eminently successful.

Dr. John N. Robinson, in conjunction with Dr. Earl T. Engle of the Obstetrical and Gynecological Service, participated in a panel discussion on problems of the aged at the New York Academy of Medicine during November. He and Dr. Engle published a chapter in the August

volume of the Pediatric Clinics of North America on the subject of cryptorchidism and its modern treatment. They advocate an important advance in the therapy of this condition as a result of their experimental work, which indicates that undescended testes should be brought down into the scrotum before the age of five years. If the testes are left in the abdomen beyond this point, they may not develop. Dr. Robinson was also appointed to the Board of Governors of the American College of Surgeons.

Dr. George W. Fish continued as the official representative of the American Urological Association with the Armed Forces. He also continued as Treasurer of the New York County Medical Society, an editor of the Journal of Urology and member of the Board of Governors of the American College of Surgeons.

Dr. Charles T. Hazzard, recently President of the New York Section of the American Urological Association, continues as a member of its Executive Committee. Dr. Ralph Yeaw succeeds him as President. Drs. Thomas Sullivan and Reginald Seidel are assisting in the development of a program for the alumni of the Squier Urological Clinic who are practicing urology in this country and abroad. Dr. J. Timothy Donovan joined the Attending Staff of the Clinic, upon completion of his resident training here. He is undertaking a study of polycystic kidney disease and helping draw up classifications for various types of urological cancer.

Dr. Ralph Veenema will take over the duties of Chief of the Out-Patient Urology Clinic on January 1, 1956. Dr. Harry Seneca, of the unit for research in microbiology in urology, has made anti-microbial investigations, using several new antibiotic agents such as streptonivicin and cathomycin. Both these drugs are effective against gram positive cocci and endamoeba histolytica. Another drug, Nystatin, was also found to be active against E. histolytica. Dr. Seneca has also been collecting resistant strains of certain organisms from hospitals all over the country and testing mutations in their growth to determine the best method for controlling those which have grown resistant to all ordinary types of medication. Investigation of the drugs Erythromycin and Carbomycin continues. Further experiments are being done in an effort to develop immunological tests for the diagnosis of bacterial diseases by absorbing antigens on the surface of sheep erythrocytes or protozoa. The role of steroids such as prednisone, prednisolone and compound S diene in the protection of animals against infection is now being studied.

The Urological Cancer Research Group, under Dr. Perry Hudson, continued its investigations into the dependability of the acid phosphatase as a diagnostic test for prostatic cancer. Enzyme work aimed at

lowering the amount of uric acid in the serum was done. Other enzymes were purified. The fates of some of the new steroid hormones, such as meticorten, in the human body were studied by experimentation on the perfused kidney. Studies of the blood coming from the testes were conducted to determine the nature and type of hormones being excreted. The biosynthesis of nucleic acids in normal and malignant human cells is being studied. The Group presented 17 papers dealing primarily with cancer of the urogenital tract and allied subjects during the year.

Dr. Lattimer continued his research work on the most effective method for employing the new drugs to control kidney tuberculosis. Their application has reduced mortality from this lethal disease from approximately 80% to 8%. Still newer drugs are now under investigation. At the request of the National Tuberculosis Association Committee on Therapy, Dr. Lattimer drew up a plan for the treatment of this disease, which the Committee published as the recommended treatment for 1955. He spoke before a Government-sponsored conference on the chemotherapy of tuberculosis, as well as before the American Urological Association and the national meeting of the American Medical Association on this subject.

In conjunction with Dr. Harold Lamport of the School of Medicine of Yale University, Dr. Lattimer is studying an ultrasonic device for destroying stones impacted in the ureter. It consists of a slender metal tip, which can be inserted up the ureter with a cystoscope until the stone is touched. Suction may be applied to draw the stone and the tip close together. Ultrasonic vibrations are then transmitted to the stone through slender metal ribbons and the stone thus disintegrated. This is a new and different concept for the application of ultrasonic vibrations to ureteral stones and, if successful, may have great clinical importance.

Since the establishment of the Squier Urological Clinic in 1928, there have been 39,550 admissions to the Service, of which 28,105 were new cases. In 1955, the total number of operations was 717; the number of consultations and X-ray examinations continued their precipitous rise over previous years. It was notable that the trend toward an increase of semi-private and private admissions continued, with the ward admissions considerably below 50% of the total.

Reports

OF VOLUNTARY ORGANIZATIONS

The Alumnae Association School of Nursing

MRS. DAVID V. HABIF, President

This year the Alumnae Association is proud to report that its goal of $10,000 to sponsor a room in the proposed new library auditorium—the Helen Young Seminar Room for Nursing—was fully subscribed. The members are delighted to be able to honor Miss Young this way.

The seventh edition of Lippincott's Quick Reference Book for Nurses, revised by members of the staff of the Medical Center, was released. Widely used throughout the United States and Canada, royalties from it are placed at the disposal of the Scholarship Committee.

Miss Cecile Covell, '26, presented a paper on April 28 to the 14th annual convention of the National Association for Practical Nurse Education in Indianapolis.

During the National League for Nurses' convention in St. Louis, the Alumnae Association sponsored a luncheon on May 4 for 29 of its graduates attending from hospitals in many parts of the country. Among those from Presbyterian were Miss Mary Allanach, Miss Kathlyn Egan, Miss Priscilla Parke and Miss Delphine Wilde.

The Association entertained the graduating class at a dinner dance at the Hotel Pierre on May 26. Miss Margaret Eliot was chairman and Mr. W.E.S. Griswold, Jr., master of ceremonies.

Meetings were held in Maxwell Hall on February 17 and November 17, with the annual meeting in June. Members of the Association were then able to express some of their feeling for their dear Miss Eliot who retired during the year. The Class of 1955 was presented for membership and these officers elected for the following year: President, Mrs. David Habif; Vice-President, Mrs. William Cavanagh; Corresponding Secretary, Miss Dorothy Robinson; Recording Secretary, Miss Ruth Lynch; Treasurer, Miss Helen Young; Assistant Treasurer, Miss Margaret Wells.

Scholarships awarded during the year numbered 21. The recipient of the final Anna C. Maxwell Fellowship was Miss Hsen-Ling Shen, from Taipei, Formosa. Miss Shen is studying at Teachers College for one year.

The Alumnae Association lost 11 members through death.

The late Mrs. Edith Joy Field bequeathed her residuary estate to "The Alumnae Association of the School of Nursing of the Presbyterian

Hospital in the City of New York Pension Fund Endowment." In her lifetime, Mrs. Field had always been interested in the problems of older graduates and the Alumnae Association is deeply grateful for her generosity.

The Association again wishes to thank the Board of Trustees and the Hospital for their generous and unfailing help.

Board of Women Managers of the Babies Hospital

MRS. CASIMIR DE RHAM, President

Mrs. Grover O'Neill resigned as President of the Board on January 11, after five years of loyal and effective leadership. The Board unanimously voted thanks to Mrs. O'Neill.

A budget of $11,500 for 1955 was presented and accepted. This included an allocation of $500 as a new project for the Volunteer Department. Mrs. Conrad M. Riley was appointed representative from the Board.

Mrs. Frederic F. deRham continued to head the Nursing Committee and reported on a pilot study conducted during the year in the Presbyterian Hospital for a special nursing care unit. The Board hopes this exeriment may be tried in the Babies Hospital in the near future.

Mrs. Neville J. Booker of the House Committee reported that new type windows and screens were installed by the Hospital in all solaria and that two floors were completely redecorated.

The Recreational Therapy Department, one of the most active in the Hospital, continued to have a large attendance of school and pre-school groups. Mrs. George L. Bartlett was chairman. Miss Paula de Vautibault, director, attended a program on the importance of play for children in hospitals, sponsored by the Committee on Hospital Auxiliaries of the United Hospital Fund. Mrs. Casimir deRham was appointed to this Committee for 1955. Mrs. Charles L. Christian, assistant director of Recreational Therapy, resigned on June 1 and Miss Marion Vickers, who had worked with the department as a volunteer, replaced her. Miss Vickers organized and supplied a fine workshop, a valuable project. The Board is impressed by Miss Vickers' interest and resourcefulness, and wishes to congratulate and thank her for her contribution to the department.

With Miss Dorothy Mills again serving as group leader for the 1955 United Hospital Fund Campaign, the goal of $38,000 was exceeded. This is a splendid result and Miss Mills and her team captains are to be commended. Mrs. Alexander Keyes was chairman of Box Week and Miss Hope Kingsley assisted.

Mrs. James McCosh Magie again represented the Board and Crib-side Committee on the Welfare Council Committee.

Various departments, both in the medical and social service fields,

were asked to address the Board meetings, so that members could become more familiar with the activities and purposes of the Hospital. Dr. Rustin McIntosh presented several interesting case histories; Dr. William Silverman spoke on premature infants and research in this field; Miss Mildred Stilwell, associate director of the Social Service Department, and Mrs. Mazy Yurdin gave some enlightening case histories.

During the year, the Board recorded with great regret the death of Mrs. Thomas E. Satterthwaite, one of its charter members.

The resignations of Mrs. Anthony Adrian and Mrs. Samuel Workman were accepted with regret. Mrs. Adrian had been a very active member since 1939.

Mrs. DeForest Manice was granted leave of absence for a temporary residence in Mexico.

New members elected during the year were Mrs. Herluf K. Trudsoe and Mrs. Priscilla Havemeyer Eldredge.

Mrs. Sidney G. deKay, Mrs. Erik Eriksen, Mrs. James McCosh Magie and Mrs. Joseph V. McMullan were welcomed into the Twenty-Five Year Club in March.

Gifts to the Emergency Nursing Fund in 1955 were made by Mrs. Frederic F. deRham, Mrs. Joseph V. McMullan and Mrs. Douglas Williams. Mrs. Carll Tucker donated to the Residents Loan Fund.

It was voted to amend Article IV of the "Authorities, Duties and Procedure" of the Board. The following paragraph was added to Section 1: "If a person has completed four consecutive years as President she shall not be eligible for re-election to that office until the expiration of one year."

CRIBSIDE SOCIAL SERVICE COMMITTEE

Mrs. Leo C. Fennelly, Chairman

With the Social Service Department of the Babies Hospital integrated with the other social service departments of the Medical Center, Miss Mildred Stilwell remained in charge of the Babies Hospital unit and is an associate director of the larger unit.

There were several personnel changes in the Social Service Department in 1955. Miss Shirley London received the Louise and Gustavus Pfeiffer Foundation Scholarship for advanced study in social work. This was a great honor and she will be welcomed back to the department next summer. The retirement of Mrs. Marion Pollak on December 1 is reported with regret. She had served for many years as a very able assistant director in the department.

An affiliation with the New York School of Social Work was renewed in September and one student was assigned to the department for field work.

Mrs. Fred L. Heyes of the Board of Women Managers assisted in purchasing clothing for patients and did excellent work. Her activities resulted in substantial savings.

Mrs. Conrad Riley of the Board and Cribside Committee attended monthly staff meetings of the social service workers and suggested frequent representation from the Committee at these meetings. The United Hospital Fund held an all-day conference on March 22 to encourage better understanding and work between committees and social service departments. Three members of the Committee attended.

The Social Service office in the Clinic is being redecorated through a fund established in memory of Mr. Joseph R. Ramée.

The Committee was happy to welcome Mrs. Herluf K. Trudsoe. Mrs. Trudsoe helped accomplish the Committee's great achievement for the year, namely, the development of the Bargain Box Thrift Shop. Through the untiring efforts of Mrs. Herman Hoops, chairman, Miss Hope Kingsley and others, receipts increased to $6,465 in 1955. Mrs. William Hill accepted the chairmanship of a new project to solicit stores, warehouses, wholesalers and banks selling estates, for articles for the Bargain Box. The Committee had received excellent donations in response to letters in 1954, so this method was adopted as a new project.

Receipts from the Lenten Sewing Class were $533. The Cribside Committee raised $9,293 toward the Babies Hospital quota in the United Hospital Fund Campaign.

The Mary Harkness Convalescent Home Auxiliary

MRS. BENJAMIN STRONG, Chairman

The Mary Harkness Convalescent Home and the Strong Memorial Wing continued to run smoothly under the able direction of Miss Miriam Hubbard and her assistant, Miss Ann Parsons.

The census of the adult section during 1955 was higher than in previous years, but that of the Children's Wing was lower. Inquiries into the occupancy of other convalescent homes and hospitals found the children's census in all of them to be lower than before. This is partly due to new and more effective drugs, and fresh discoveries in preventive medicine for children's diseases. The Home is now accepting pediatric patients from other hospitals in Westchester.

Members of the Auxiliary deeply regret the death of Rev. Harold Buckminster, who had so kindly given a short religious service every Sunday morning to adults and children. They also regret the passing of Miss Marie Hartlieb, one of the staff nurses at the Home.

The Auxiliary's volunteer program was considerably augmented following affiliation with the White Plains Volunteer Center, particularly during January to June.

The Home and grounds were used by administrative and professional staffs, nurses and auxiliaries of the Hospital for meetings and outings. Many cook-outs and picnics were held in suitable weather for adult and child patients, as well as parties on special days. Children's birthdays were celebrated with a decorated cake and ice cream, and adults of 80 or over also had their anniversaries observed.

The Auxiliary is very grateful to the Orthopaedic Women's Auxiliary for the full-length movie films sent weekly.

Members also greatly appreciated the Christmas dolls dressed and donated by ladies of the United States Trust Company, and the gifts and dolls made and given by ladies of the Presbyterian Church of Rye. Bristol-Myers, through the kindness of Mrs. William M. Bristol, Jr., sent many toilet gifts.

There is now greater latitude in visiting hours at the Home. Wednesday, Saturday and Sunday afternoons are the scheduled times, but visitors frequently come at other hours by special appointment.

Patients need no longer be in their rooms by 9:30 p.m. Evening are spent in the television room, playing games or reading.

The Auxiliary welcomed as new members Mrs. George B. Gibbons Jr., Mrs. Jeremiah Milbank, Jr., Mrs. William Watson and Mrs. Edward M. Wheeler. Mrs. Jeremiah Milbank, Sr. found it necessary to resign.

Being fairly new, the Auxiliary appreciates all the help and patience shown by the Hospital. The monthly luncheon meetings help members to keep in touch with the Hospital and other auxiliaries, and while not situated within the Hospital grounds, they are beginning to feel a closer association. They earnestly hope that as the years go on the Auxiliary will be of more and more use to the Mary Harkness Convalescent Home and the Hospital.

Neurological Institute Auxiliary

MRS. BYRON STOOKEY, Chairman

Several significant changes took place in the Social Service Department of the Neurological Institute during the year. Most important of these was the appointment of a full-time director, Miss Barbara Kohlsaat, who, with a distinguished background of training and experience in the field, added strength and direction to department activities.

The Auxiliary is pleased that all the social service departments in the Medical Center are so efficiently integrated under Miss Elizabeth Prichard's supervision. A special measure of gratitude is due to Miss Prichard for her direction of the Neurological Social Service Department before Miss Kohlsaat's arrival in March.

The staff is now only one short of its complement and all members deserve praise for the way they meet the ever-increasing demands made upon them. In addition to the routine functions and responsibilities of providing social service to patients, there are also the obligations associated with a center for advanced education in medical social work.

Funds raised by the Auxiliary, through the untiring efforts of the Thrift Shop Committee under Mrs. Royall Cannaday's able leadership, and the United Hospital Fund teams directed by Mrs. William Shippen Davis and Mrs. Charles E. Adams, amounted to $28,971 this year. Of this sum, the Thrift Shop contributed $10,585, an increase of $1,306 over last year, and the United Hospital Fund drive raised $18,386.

In addition to the work of these two groups, it is gratifying to report that in 1955 members took a more active part in the work of one or more of the other committees within the Auxiliary: House, Library, Membership, Monthly Medical Center Lunches, Nominating and Volunteer.

The Auxiliary reports with regret the resignation of Mrs. Thorneycroft Ryle, who had served for many years as a constructive and helpful member. Mrs. Lawrence Kolb and Mrs. William B. Murray were welcomed as new members. It is with particular pleasure that the Auxiliary announces the election of Mrs. Henry S. Fenimore Cooper as chairman for 1956.

Women's Auxiliary of the New York Orthopaedic Dispensary and Hospital



MRS. S. HAZARD GILLESPIE, JR., Chairman

The end of the year marked the fifth anniversary of the Orthopaedic Hospital's move to the Presbyterian Medical Center. Much was gained in the way of modern equipment, and medical and teaching facilities. It was the aim of the Women's Auxiliary to see that none of the warmth and friendliness of human relations was lost. Many of the same faces are still seen in the corridors and many members of the Board, staff and Administration are old friends.

The children's wards continued to be the Auxiliary's special interest. The Hospital kept the sun porch gaily decorated and F.A.O. Schwarz and other kind friends generously gave toys, a record player and a radio-phonograph.

A recreational therapist is most important in a children's program. To provide encouragement, entertainment and affection for children who are often partially immobilized by casts and remain in a hospital for months, is a very challenging and rewarding job. Mrs. Joan Perls, the therapist, handled all her assignments most successfully during the year and, in addition, helped the nurses and trained several students. Unfortunately, she is leaving to take up household duties, but during her stay she made the need for such a job so obvious that there have been numerous requests for its continuance.

The Occupational Therapy Department under Mrs. Helen White was most active in Orthopaedic this year. Miss Eunice Ford, the therapist on the fifth floor, had an assistant and some volunteers helping her. When morale was low in long-term patients, they had an answer with new projects in the shop, a Scrabble tournament or an Easter hat-designing contest. The Auxiliary continued to show movies regularly to adults and children, and members were happy to have worked out an arrangement whereby Mary Harkness Home received films for weekly showings.

There were several parties at holiday time. Claribel, the clown, was a favorite visitor, with singers and story tellers coming at Christmas and Easter. The Auxiliary again filled stockings for each child remaining

in the hospital over Christmas.

In the Out-Patient Department, Miss Helen Irwin carried on indefatigably. The Social Service Department managed to care for all who came to them for help. Long hours were spent in consultation with the medical staff and hundreds of applications for appliances processed. Miss Irwin also regularly attended Auxiliary meetings, reporting on those patients who were old acquaintances and any new ones of special interest. She bought Christmas presents for the Out-Patient Department and arranged trips to the circus and rodeo. Friends and Auxiliary members helped to escort patient. Miss Irwin also organized a most interesting tour of the Institute for the Crippled and Disabled during the spring.

The Auxiliary raised $30,987 for the United Hospital Fund drive in 1955. Sincere thanks go to Mrs. Edward Gerry and Mrs. William Kirkland, who headed the Auxiliary's team and did far more than their share of the work. Mrs. James K. Cogswell also did an outstanding job as Box Week Chairman.

The Auxiliary voted to contribute $1100 toward the expenses of the Volunteer Department and $700 for the Library. It was felt that these were Auxiliary interests and deserved members' support.

During the year the resignation of Mrs. L. Gordon Hammersley was regretfully accepted. Mrs. Peter Stephaich was welcomed as a new member.

Miss Delphine Wilde may be said to be the hub around which the Orthopaedic wheel revolves. She or Miss Hester Brown report faithfully every month, and the Auxiliary relies on them with complete confidence.

Gratitude is again expressed to the Hospital Administration for the smooth and cordial way in which the Orthopaedic group has been integrated into the Presbyterian family.

Women's Auxiliary of the Presbyterian Hospital



MRS. GEORGE A. PERERA, Chairman

The Auxiliary, composed of 51 active and 24 associate members, continued its interest in the Hospital, with particular concern for social service and occupational therapy, the volunteer program and the patients' library.

The deaths of Mrs. Yale Kneeland and Mrs. Frank C. Decker, Jr. are reported with deep regret. Mrs. Kneeland, who had been a member since 1909 and President for over 20 years, passed away in February. She initiated many Auxiliary activities as she saw the needs of the Hospital, and was always a woman of vision and energy. The Anna Ball Kneeland Memorial Fund was turned over to the Social Service Department to be used for staff development. Mrs. Decker had been a member of the Auxiliary since 1942 and had been active in serving the Milbank Library. A fund in her memory was given to the librarian to use for special needs.

The Auxiliary also regrets the resignations of Mrs. Robert S. Grinnell as a co-chairman of the Thrift Shop Committee, and Mrs. I. L. Kramer as library chairman. It appreciates all they have done to serve these committees and is pleased that they will continue as members of the group. Miss Jeannette Olyphant, another long-term and helpful member, resigned from associate status.

Mrs. Goddard Bauer, Mrs. David C. Bull, Mrs. Walter P. Chrysler, Jr., Mrs. Crosby Hornblow and Mrs. Edward B. Self were welcomed as new members.

It was gratifying that Mrs. Louis Connick was made a member of the House Committee of the Board of Trustees and Mrs. Robert H. E. Elliott, Jr. a member of the Nursing Committee.

Mrs. C. Redington Barrett, Chairman of the United Hospital Fund Compaign Committee, and her 38 workers raised a record sum for the Auxiliary of $31,226 from 809 gifts. Mrs. Ralph H. Boots, Mrs. James M. Breed, Mrs. Edgar Stillman and Mrs. Frank E. Stinchfield assisted as team captains, and all are to be congratulated for their outstanding work.

The Stuyvesant Square Thrift Shop was able to increase its revenue following the move to new quarters in May. Mrs. Stresenreuter Butler and her co-workers raised $3,858. A delightful tea and fashion show was held

at the home of Mrs. W. Roy Manny in January, and in September the group cooperated with other units in the Thrift Shop in a large fashion show and luncheon.

Mrs. Howard G. Bruenn succeeded Mrs. Kramer as Chairman of the Milbank Library Committee, and cooperated with Mrs. Yolanda McKnight and the volunteers to see that the reading requirements of patients and staff were met. The loan of artistic prints to brighten the wards continued through the efforts of Mrs. Sidney Fibel. The renewal of numerous magazine subscriptions and a gift of modern foreign language books, not to mention increased financial contributions, are indicative of the members' desire to meet the needs of the Library.

The Volunteer Department was an exceedingly active spot, despite the long illness of the director, Miss Laura Vossler. It was almost too active for present quarters, and it is hoped that more space for these willing workers can be found. Mrs. Louise Barnett and Mrs. Anna Mackenzie Smith kept the office running smoothly and Miss Hattie Bruns assisted part-time. Great credit should be given the many volunteers who also worked in the office.

During the spring it was decided to curtail intake and placement to fit better into quarters, so that the total of 80,475 volunteer hours indicates a five per cent decrease from the previous year. At the same time, 760 volunteers were handled by the office, the largest number yet. Because of the high employment market many volunteers gave less time, and it was found that the monthly average of 180 day volunteers and 130 evening workers could not meet all the Hospital requests for service.

Volunteers were honored at a tea given by the Hospital, at which 138 pins were awarded and 17 volunteers were praised for having served five or more consecutive years. At the United Hospital Fund Awards Meeting, 184 Presbyterian volunteers received awards, including eight who had given more than 4000 hours of service.

Knowing the needs and the value of the Volunteer Department, the Auxiliary substantially increased its financial contribution.

The Occupational Therapy Department now has a full staff under Mrs. Helen White's direction. Supervised by trained therapists, volunteers continued to help with diversional aspects of the program. Several interesting and stimulating meetings at the United Hospital Fund gave new ideas on craft work particularly.

Under the leadership of Miss Elizabeth Prichard, the Social Service Department served 15,408 patients, of whom 8255 needed either long or short-term casework. Mrs. Claire Wheat was appointed Associate Director in charge of the Social Service in Presbyterian Hospital, and the Auxiliary is happy to work with her and Miss Prichard.

Those members of the Auxiliary who know her feel the loss of Miss Florence Harvey, who retired after 30 years of service. They were particularly gratified to share in the work of this Department through the Anna Ball Kneeland Memorial Fund. This paid for reprints of Miss Harvey's article on the social effects of breast surgery, enabled staff members to attend seminars or conferences and underwrote the cost of showing two films.

Some of the Auxiliary members served on United Hospital Fund committees, attending or participating in conferences and symposia and thus bringing back to the group a wider outlook and valuable information.

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Hoppenfeld, Mrs. Celia
Hornblow, Mrs. Crosby
Horwitz, Miss Annette
Hoskins, Mrs. Everett
Hudgins, Mrs. Carlys
Hudson, Miss Lillian
Hull, Miss Katherine
Hurbaugh, Mrs. Patricia
Hursh, Mrs. Hazel
Immerman, Mrs. Pauline
Inoue, Mrs. Helen
Jaquith, Mrs. Hannah
Jensen, Miss Gerda
Jensen, Miss Valerie
Joblin, Mrs. Bette
Johnson, Mrs. Elsie
Kahn, Miss Margie
Kalik, Mrs. Ida
Kaplan, Mrs. Roslyn
Kardish, Miss Ruth
Karfunkel, Mrs. Rose
Karliner, Mr. Joel
Kastle, Mrs. Anna
Kaufman, Mrs. Carol
Kaufmann, Miss Ida
Kaufmann, Miss Selma
Kavanagh, Miss Madeleine
Kelley, Mrs. Doris
Kiely, Miss Katherine
Kilpatrick, Mrs. James
Kim, Miss Helen
King, Mrs. Carlsa
King, Miss Marilyn
Kiry, Miss Marion
Knurr, Mrs. Lilly
Kornig, Miss Judy Lorraine
Kohorn, Mr. Robert
Korper, Mrs. Frieda
Kusbach, Mr. Paul
Landau, Mrs. Anne R.
Landesman, Mrs. Frances
Lauer, Miss Evelyn
Lawless, Miss Marie
Leitner, Miss Doris
Leonard, Miss Elizabeth
Linchitz, Miss Roselyn
Lipman, Mrs. Miriam
Lippmann, Miss Jill
Loehr, Miss Michelle
Lopez, Mrs. Jeanne
Lowit, Mr. Alfred
Ludlow, Mrs. Joseph
McCarthy, Miss Dorothy
McCutcheon, Miss Nancy
McDonald, Miss Mary Nims
McDonald, Mrs. Blanche
Macerone, Miss Gloria
Maguire, Mr. Terrence
Mansbach, Miss Judith
Marcus, Miss Florence
Marcuse, Miss Judith
Margolis, Mr. Carl
Mason, Miss Chloe
Mayer, Miss Inge
Mende, Mrs. Ida
Mendelssohn, Mrs. Estelle
Merkowitz, Mrs. Betty
Merrill, Miss Gertrude
Merritt, Mrs. H. Houston
Meyer, Miss Marion
Miller, Miss Jane
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Mirayes, Mrs. Juanita
Mitsch, Miss Elsie
Mohni, Mr. Robert
Mohorovicic, Mrs. Desa
Moldof, Miss Susan
Mollenhauer, Mrs. Josephine
Monjan, Mr. Andrew
Moon, Miss Adeline
Moore, Mrs. Geraldine
Moore, Miss Sally
Morese, Miss Emelia Senya
Morton, Mrs. Elizabeth
Moss, Mrs. Gertrude
Moza, Miss Elizabeth
Muniz, Miss Nimia E.
Murphy, Miss Helen
Musgrave, Miss Maud
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Napier, Miss Lila

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Neil, Mrs. Joan
Neiss, Mr. Edgar
Nelan, Mr. William
Nicolson, Mr. Grant
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Ould, Miss Julia
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Pascal, Miss Rosemary
Paschal, Mrs. Dorothy
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Peltier, Miss Jacqueline
Pena, Mr. Vincent
Perera, Mrs. George A.
Pfeiffer, Miss Edith
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Picker, Miss Carol
Pierce, Mrs. Mary
Pletcher, Miss Julia
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Polayes, Miss Marcia
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Quero, Miss Eunice
Raices, Mrs. Sue
Reaney, Miss Myrtle
Regendahl, Miss Shirley
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Rivera, Miss Hilda
Robins, Miss Audrey
Rosaler, Mrs. Florence
Rosch, Mrs. Ida
Rose, Mrs. Esther
Rosen, Mr. Stanley
Rosenberg, Mrs. Bertha
Rosenfelder, Mrs. Johanna
Ross, Miss Jean
Rothstein, Miss Jean
Rudnick, Mrs. Rose
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Sacks, Miss Renee
Salter, Miss Billie
San Andres, Miss Eva
Sanchez, Miss Estrella
Santulli, Mrs. Dorothy
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Schmidt, Miss Marguerite
Schoffeniels, Mrs. Marthe
Schultz, Miss Dorothy
Schwartz, Mrs. Alvina
Schwartz, Miss Debby
Schwarzbarth, Mrs. Mildred
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Seay, Miss Katherine
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Stern, Miss Susan
Sternschein, Miss Ruth
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Williamson, Miss Lois
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Arthur Purdy Stout, M.D. ..... *Surgery*
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Royal C. Van Etten, M.D. ..... *Obstetrics & Gynecology*
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Norman A. Bergman, M.D.
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Rita Ann Jacobs, M.D.
*Marilyn M. Kritchman, M.D.

Assistant Residents

Monica I. Aleniewski, M.D.
Bernard Batt, M.D.
Roger W. Bumgarner, M.D.
Addison J. Burke, M.D.

†Deceased
*Leave of Absence

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Irvin L. Hunt, Jr., D.D.S.
Barnet M. Levy, D.D.S.
Alvin S. Nathan, D.D.S.
Solomon N. Rosenstein, D.D.S.
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Edward V. Zegarelli, D.D.S.

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Joseph A. Cuttita, D.D.S.
Kourken A. Daglian, D.D.S.
Robert E. Herlands. D.D.S.
John D. Piro, D.D.S.
L. Laszlo Schwartz, D.D.S.
Boaz M. Shattan, D.D.S.

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George Minervini, D.D.S.
Stephen Nachbar, D.D.S.
Russell Ross, D.D.S.

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Leslie P. Barker, M.D.
Paul Gross. M.D.
Beatrice M. Kesten, M.D.
Gerald F. Machacek, M.D.
J. Lowry Miller, M.D.
Dabney Moon-Adams, M.D.

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Vanderbilt Clinic
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William Curth, M.D.
Anthony N. Domonkos, M.D.
Leo Schweich, M.D.

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Vanderbilt Clinic
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F. Philip Lowenfish, M.D.
James E. Ridgway, M.D.
Meyer H. Slatkin. M.D.
Milton B. Sloane, M.D.

Assistant Attending Dermatologists
Vanderbilt Clinic
Charles F. Post, M.D.
Theodore Rosenthal, M.D.

Assistant Dermatologists
Vanderbilt Clinic
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Marvin Brodey, M.D.
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Marie Karelitz-Karry, M.D.
Royal M. Montgomery, M.D.
Paul F. Norris, M.D.
Norman Parrott, M.D.
Joseph S. Shapiro, M.D.
Victor M. Torres, M.D.

Mycologist
Rhoda W. Benham, Ph.D.

Resident

E. William Jewell, M.D.

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Irving Abrahams, M.D.
Marcus M. Key, M.D.

Visiting Fellows

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Raoul M. Hansen, M. D.
Harriet D. James, M.D.
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Dickinson W. Richards, Jr., M.D.

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Bertram J. Sanger, M.D.
David Seegal, M.D.
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William B. Sherman, M.D.
**Martin DeForest Smith, M.D.
Hamilton Southworth, M.D.
John V. Taggart, M.D.
Joseph C. Turner, M.D.
Sidney C. Werner, M.D.

Assistant Attending Physicians

Henry Aranow, Jr., M.D.
Howard G. Bruenn, M.D.
George A. Carden, Jr., M.D.
Stuart W. Cosgriff, M.D.
**Armistead C. Crump, M.D.
C. Dary Dunham, M.D.
Alfred P. Fishman, M.D.
Shirley C. Fisk, M.D.
Alfred Gellhorn, M.D.
Marcel Goldenberg, M.D.
Abbie I. Knowlton, M.D.
Albert R. Lamb, Jr., M.D.
Robert Muller, M.D.
Arthur J. Patek, Jr., M.D.
Kermit L. Pines, M.D.
Calvin H. Plimpton, M.D.
Harry M. Rose, M.D.
Theodore B. Russell, M.D.
Israel H. Scheinberg, M.D.
Franklin A. Stevens, M.D.
**Edgar Stillman, M.D.
Rene Wegria, M.D.
Herbert B. Wilcox, Jr., M.D.

Assistant Physicians

Casco Alston, M.D.
Helen M. Anderson, M.D.
Alice T. Baker, M.D.
John M. Baldwin, Jr., M.D.
Eli Bauman, M.D.
Gustav J. Beck, M.D.
Geraldine P. Bradley, M.D.
Alfred E. Brewer, M.D.
Daniel N. Brown, M.D.
M. Edwina Campbell, M.D.
Alfred W. Childs, M.D.
Nicholas P. Christy, M.D.
Henry P. Colmore, M.D.
Burton Combes, M.D.
Crispin Cooke, M.D.
*Jean Corwin, M.D.
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Lawrence H. Cotter, M.D.
Richard J. Cross, M.D.
Clarence J. D'Alton, M.D.
Felix E. Demartini, M.D.
Richard B. Duane, Jr., M.D.
Samuel Dvoskin, M.D.
Wallace Victor Epstein, M.D.
Winifred H. Franklin, M.D.
Bettina Garthwaite, M.D.
Claudio Gerbi, M.D.
Augustus Gibson, M.D.
Albert W. Grokoest, M.D.
George C. Hennig, M.D.
Hilary H. Holmes, M.D.
Calderon Howe, M.D.
George A. Hyman, M.D.
A. Gregory Jameson, M.D.
Gwendolen S. Jones, M.D.
Dorothy Terrace Kreiger, M.D.
Robert A. Kritzler, M.D.
John H. Laragh, M.D.
Daniel L. Larson, M.D.
Edgar Leifer, M.D.
James Leland, M.D.
Michael J. Lepore, M.D.
Mato L. Marinovich, M.D.
Henry E. Marks, M.D.
James A. L. Mathers, M.D.

*Leave of Absence
**Inactive

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Kenneth A. McClane, M.D.
*George Henry McCormack Jr., M.D.
Robert B. McKittrick, M.D.
George W. Melcher, Jr., M.D.
Councilman Morgan, M.D.
Isidor Mufson, M.D.
Hans W. Neuberg, M.D.
Fellowes M. Pruyn, M.D.
Helen M. Ranney, M.D.
*David Schachter, M.D.
Frederick H. Shillito, M.D.
Howard B. Shookhoff, M.D.
DeWitt H. Smith, M.D.
Arthur I. Snyder, M.D.
William H. Stearns, M.D.
Alfred Steiner, M.D.
Richard J. Stock, M.D.
K. Jefferson Thomson, M.D.
Cornelius J. Tyson, Jr., M.D.
T. Lloyd Tyson, M.D.
Stanley Ulick, M.D.
Paul Wermer, M.D.
Henry O. Wheeler, M.D.
Carl R. Wise, M.D.
John A. Wood, M.D.

Attending Physicians
Vanderbilt Clinic
Louis Schneider, M.D.
Max Soley, M.D.

Assistant Attending Physicians
Vanderbilt Clinic
Ernest F. Gordon, M.D.
Leopold Jordani, M.D.
Julia V. Lichtenstein, M.D.

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Vanderbilt Clinic
Stewart F. Alexander, M.D.
Roslyn Barhash, M.D.
Achsa M. Bean, M.D.
John T. Beaty, M.D.
Hylan A Bickerman, M.D.
Winifred Bronson, M.D.
Richard M. Carey, M.D.
Henry Colcher, M.D.
Neal J. Conan, M.D.
John Van B. Dean, M.D.
Elias Diamond, M.D
Henry W. Doyle, M.D.
Erna S. Enderle, M.D.
Dorothy Estes, M.D.
Elaine German, M.D.
David Hamerman, M.D.
Hans Kaunitz, M.D.
Maxwell J. Marder, M.D.
Paul A. Marks, M.D.
Robert P. Nohle, M.D.
Elliott F. Osserman, M.D.
Charles M. Plotz, M.D.
Morris R. Rapoport, M.D.
James W. Robinson, M.D.
Matthew Rosenchien, Jr., M.D.
William H. Russell, M.D.
Louis A. Scarrone, M.D.
Sidney Schnittke, M.D.
Murray D. Shepp, M.D.
Cristobal A. Vicens, M.D.
William I. Weiss, M.D.

Attending Physician
Mary Harkness Convalescent Home
John T. Beaty, M.D.

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*Michael Heidelberger, Ph.D.
Karl Meyer, M.D.

Clinical Anthropologist
William H. Sheldon, M.D.

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Vanderbilt Clinic
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John J. Slevin, Pod.D.

Podiatrist
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Paul J. Greenberg, Pod.D.

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John A. Fajardo, Pod.D.
Bernard Rosenstein, Pod.D.

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John Peter Malia, M.D.

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Thomas B. Bradley, Jr., M.D.
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John H. Bryant, M.D.
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Edwin P. Maynard, M.D.
Jay I. Meltzer, M.D.
Elmer Pader, M.D.
Tor Richter, M.D.

*Leave of Absence

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Lawrence I. Rothfield, M.D.
John I. Sandson, M.D.
Lloyd H. Smith, Jr., M.D.
W. Pierce Smith, M.D.
John S. Thompson, M.D.
Thomas Tomasi, M.D.
Earl A. Wheaton, Jr., M.D.
Joseph P. White, M.D
Roy A. Wiggins, M.D.
Herbert Wohl, M.D.
Benjamin M. Wright, M.D.

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Arnold L. Flick, M.D.
Andrew G. Frantz, M.D.
DeWitt S. Goodman, M.D.
Eugene L. Gottfried, M.D.
Jane A. Heitmann, M.D.
Alan F. Hofmann, M.D.
George H. Hogle, M.D.
Samuel B. Joyner, M.D.
Donald M. Marcus, M.D.
Clifton K. Meador, M.D.
Stephen I. Morse, M.D.
Daniel Nathans, M.D.
Efren A. Ramirez, M.D.
Richard A. Rifkind, M.D.
Dudley F. Rochester, M.D.
Harold F. Spalter, M.D.
John F. Watson, M.D.

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David S. Howell, M.D.
William H. Hulet, M.D.
Ronald W. Lamont-Havers, M.D.
Frederick C. McDuffie, M.D.
Borje E. C. Nordin, M.D.
Paul P. VanArsdel, Jr., M.D.

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Microbiologist
Elvin A. Kabat, Ph.D.

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Lester A. Mount, M.D.
Joseph Ransohoff, M.D.

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Assistant Neurological Surgeon
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Clinical Fellow
William H. Cook, M.D.

Visiting Fellow
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(Neurological Institute)

Director of Service
H. Houston Merritt, M.D.

Attending Neurologists
Sidney Carter, M.D.
L. Beverley Chaney, M.D.
Angus M. Frantz, M.D.
Clarence C. Hare, M.D.
George H. Hyslop, M.D.
Rollo J. Masselink, M.D.
John McD. McKinney, M.D.
Irving J. Sands, M.D.
Carmine T. Vicale, M.D.

Associate Attending Neurologists
Francis C. Ansanelli, M.D.
William F. Caveness, M.D.
Stanley M. Dillenberg, M.D.
Lewis J. Doshay, M.D.
Arnold Friedman, M.D.
Maurice Frocht, M.D.
Alfred Gallinek, M.D.
Eli S. Goldensohn, M.D.
Justin L. Greene, M.D.
Ernst Herz, M.D.
Paul F. A. Hoefer, M.D.
Lothar B. Kalinowsky, M.D.
Joseph Moldaver, M.D.
Hyman A. Osserman, M.D.
Samuel Reback, M.D.

Associate Attending Neurologists, Cont'd
Albert A. Rosner, M.D.
Leon A. Salmon, M.D.
Daniel Sciarra, M.D.
Maximilian Silbermann, M.D.
Michael H. Teitelbaum, M.D.
Samuel F. Thomas, M.D.
Hyman G. Weitzen, M.D.
Melvin D. Yahr, M.D.

Assistant Attending Neurologists
William Amols, M.D.
S. Muriel Baron, M.D.
Paul J. Buckley, M.D.
**Royall G. Cannaday, M.D.
Malcolm B. Carpenter, M.D.
Sidney M. Cohen, M.D.
Kate Constable, M.D.
James F. Culleton, M.D.
Jean P. Davis, M.D.
Zira DeFries, M.D.
Robert A. Fishman, M.D.
Sidney S. Goldensohn, M.D.
Werner Hochstetter, M.D.
Frank P. Iorio, M.D.
Stanley Lesse, M.D.
Theodore Lipin, M.D.
**William Mayer, M.D.
**Henry W. Miller, M.D.
Geoffrey F. Osler, M.D.
Bernard Pacella, M.D.
Raul Pietri, M.D.
Harry R. Potter, M.D.
Catherine E. Spears, M.D.
Frederic T. Zimmerman, M.D.

Assistant Neurologists
Stanley Martin Ball, M.D.
Ludwig V. Chiavacci, M.D.
Melvin B. Robbins, M.D.
James McD. Watson, M.D.

Associate Attending Neurologist Vanderbilt Clinic
**Florizel DeL. Myers, M.D.

Assistant Neurologists, Vanderbilt Clinic
Franklin S. DuBois, M.D.
**William R. Dyer, M.D.
Elizabeth B. Eken, M.D.
Lewis P. Rowland, M.D.
Faith C. Walsh, M.D.

Residents
Thomas R. Johns, M.D.
Charles M. Poser, M.D.

Assistant Residents
James H. Austin, M.D.
Miriam W. Carmichael, M.D.
William K. Clark, M.D.
Robert A. DeNapoli, M.D.
Leslie H. Gaelen, M.D.
William K. Hass, M.D.
Robert Katzman, M.D.
Elliott L. Mancall, M.D.
David A. Miles, M.D.
Joseph L. O'Brien, M.D.
Isabelle Rapin, M.D.
Joseph W. Robertson, M.D.
Labe C. Scheinberg, M.D.
Julia Schneider, M.D.
William A. Sibley, M.D.
Michael Small, M.D.
Hartwell G. Thompson, Jr., M.D.

Clinical Fellow
Joseph Marotta, M.D.

Visiting Fellows
Richard J. Allen, M.D.
Patrick F. Bray, M.D.
Eugene W. Loeser, Jr., M.D.
Niels L. Low, M.D.
DeSaussure F. Philpot, Jr., M.D.
Robert H. Sturman, M.D.
Howard J. Tucker, M.D.

OBSTETRICS AND GYNECOLOGY
(Sloane Hospital for Women)

Director of Service
Howard C. Taylor, Jr., M.D.

Attending Obstetricians and Gynecologists
E. Everett Bunzel, M.D.
Virgil G. Damon, M.D.
D. Anthony D'Esopo, M.D.

Associate Attending Physician
Alvin J. B. Tillman, M.D.

Associate Attending Obstetricians and Gynecologists
Stanley M. Bysshe, M.D.
Saul B. Gusberg, M.D.
Charles M. Steer, M.D.

Assistant Attending Obstetricians and Gynecologists
William V. Cavanagh, M.D.
Marion D. Laird, M.D.
James R. Montgomery, M.D.
Equinn W. Munnell, M.D.
C. Paul O'Connell, M.D.
Albert A. Plentl, M.D.
John B. Rearden, M.D.
Landrum B. Shettles, M.D.
Harold Speert, M.D.

**Inactive

Assistant Obstetricians and Gynecologists

Arnold N. Fenton, M.D.
Henry Clay Frick, II, M.D.
Dean J. Grandin, M.D.
Robert E. Hall, M.D.
David B. Moore, M.D.
Anna L. Southam, M.D.
Harold M. M. Tovell, M.D.

Assistant Attending Gynecologist Vanderbilt Clinic

Thomas J. Parks, M.D.

Assistant Obstetricians and Gynecologists, Vanderbilt Clinic

Robert Cowan Arrants, M.D.
Joseph Blanchard, M.D.
Ferdinand H. Flick, M.D.
Angela Marie Vedovi, M.D.
Howard Lee Walker, M.D.

Residents

Stephen G. Burgess, M.D.
Emanuel A. Friedman, M.D.
Robert L. Hallet, M.D.
Donald L. Hutchinson, M.D.
George Montgomery, Jr., M.D.

Assistant Residents

Richard S. Banfield, Jr., M.D.
Walter A. Bonney, Jr., M.D.
Playford Boyle, Jr., M.D.
Donald J. Brugger, M.D.
William J. Chase, M.D.
Charles DiLiberti, M.D.
Caroline B. Hunter, M.D.
Herbert M. Magram, M.D.
George P. McGuire, M.D.
Hiram W. Mendenhall, M.D.
Joseph A. Montimurro, M.D.
Warner Nash, M.D.
Richard L. O'Connell, M.D.
Mario Petrini, M.D.
Donald R. Reisfield, M.D.
J. Courtland Robinson, M.D.
William N. Rotton, M.D.
James W. Rutherford, M.D.
W. Duane Todd, M.D.
Frederick C. Vogell, M.D.
Arthur D. Wilson, M.D.
Clement Yahia, M.D.

OPHTHALMOLOGY

(Institute of Ophthalmology)

Director of Service

John H. Dunnington, M.D.

Attending Ophthalmologist and Pathologist

Algernon B. Reese, M.D.

Attending Ophthalmologists

Gordon M. Bruce, M.D.
John P. Macnie, M.D.
Charles A. Perera, M.D.
Raymond L. Pfeiffer, M.D.
*Ludwig von Sallmann, M.D.
Maynard C. Wheeler, M.D.

Associate Attending Ophthalmologists

Raynold N. Berke, M.D.
Howard D. H. Brown, M.D.
Willis S. Knighton, M.D.

Assistant Attending Ophthalmologists

Frank D. Carroll, M.D.
J. Vincent Flack, M.D.
Frank Payne, M.D.
Osborn P. Perkins, M.D.
**M. Uribe Troncoso, M.D.
Joseph A. C. Wadsworth, M.D.

Assistant Ophthalmologists

C. Gregory Barer, M.D.
Graham Clark, M.D.
Robert McC. Day, M.D.
Andrew deRoetth, Jr., M.D.
Arnold W. Forrest, M.D.
C. Ray Franklin, M.D.
Ira Snow Jones, M.D.
Philip Knapp, M.D.
George R. Merriam, Jr., M.D.
Ellen F. Regan, M.D.

Assistant Ophthalmologists Vanderbilt Clinic

Donald E. Tinkess, M.D.
V. Raymond Tokar, M.D.

Residents

William G. Everett, M.D.
Floyd H. Farrant, M.D.
A. Gardner Watson, M.D.

Assistant Residents

Robert P. Burns, M.D.
Charles J. Campbell, M.D.
Anthony Donn, M.D.
Robert M. Ellsworth, M.D.
John W. McTigue, M.D.
David H. Rhodes, M.D.
Bradley R. Straatsma, M.D.

Clinical Fellow

John M. Walcott. M.D.

*Leave of Absence
**Inactive

ORTHOPEDIC SURGERY

(New York Orthopaedic Dispensary and Hospital)

Director of Service

Alan DeForest Smith, M.D.

Attending Surgeons

Halford Hallock, M.D.
Leonidas Lantzounis, M.D.
Harrison L. McLaughlin, M.D.
Frank E. Stinchfield, M.D.

Associate Attending Surgeons

Everett C. Bragg, M.D.
Sawnie R. Gaston, M.D.
Frederick M. Smith, M.D.
William H. von Lackum, M.D.
Melvin B. Watkins, M.D.

Associate Attending Orthopedic Pathologist

C. Zent Garber, M.D.

Assistant Attending Surgeons

George B. Ambrose, M.D.
C. Andrew Bassett, M.D.
Robert E. Carroll, M.D.
Frederick S. Craig, M.D.
Alexander Garcia, M.D.
D. Keith McElroy, M.D.
Charles S. Neer, II, M.D.
Charles T. Ryder, M.D.

Attending Surgeon Vanderbilt Clinic

John C. McCauley, Jr., M.D.

Assistant Attending Surgeons Vanderbilt Clinic

Herman Gladstone, M.D.
Alexander D. Papas, M.D.
Horace I-sen Yu, M.D.

Assistant Attending Surgeon Mary Harkness Convalescent Home

Edward M. Wheeler, M.D.

Annie C. Kane Fellows

Bernard Cooperman, M.D.
Arthur J. Driscoll, Jr., M.D.
Alfred Francis, M.D.
Kenneth C. Francis, M.D.
Ledford G. Gregory, M.D.
Charles C. Hall, M.D.
Thomas F. Hudgins, Jr., M.D.
Bertram M. Kummel, M.D.
Ralph Lusskin, M.D.
Robert L. Samilson, M.D.
Balu Sankaran, M.D.
Ann B. Whittlesey, M.D.
Daniel M. Winters, M.D.

**Inactive

Annie C. Kane Clinical Fellow

Max Vechter, M.D.

Assistant Residents

Duke B. Baird, M.D.
Frank A. Bersani, M.D.
William J. Cannon, M.D.
Ira M. Cantin, M.D.
John E. Carroll, Jr., M.D.
Rosamond Kane, M.D.
John D. LeBouvier, M.D.
John R. Mahoney, M.D.
Leonard Marmor, M.D.
Cyril E. Shea, Jr., M.D.
Anthony J. Smith, M.D.
R. Warner Wood, M.D.

OTOLARYNGOLOGY

Director of Service

Edmund P. Fowler, Jr., M.D.

Attending Otolaryngologists

Franz Altmann, M.D.
Daniel C. Baker, Jr., M.D.
DeGraaf Woodman, M.D.

Associate Attending Otolaryngologists

George V. Browne, M.D.
Jules G. Waltner, M.D.

Assistant Attending Otolaryngologists

Edwin B. Bilchick, M.D.
Sylvester Daly, M.D.
Herbert S. Friedman, M.D.
Bela Marquit, M.D.

Assistant Otolaryngologists

Milos Basek, M.D.
Robert M. Hui, M.D.
Paul Lindenberg, M.D.
**Irving W. Voorhees, M.D.

Assistant Otolaryngologists Vanderbilt Clinic

Jules L. Glashow, M.D.
J. Douglas Lake, M.D.
Peter D. Westerhoff, Sr., M.D.

Residents

Richard Freeman, M.D.
Claude L. Pennington, Jr., M.D.

Assistant Residents

Richard H. Fitton, M.D.
David A. Hilding, M.D.
Morris Kalmon, M.D.
William B. Wladecki, M.D.

Clinical Fellows

Cesare DiRocco, M.D.
Stanley Whitfield, M.D.

PATHOLOGY

Director of Service

Harry Pratt Smith, M.D.

Attending Neuropathologist

Abner Wolf, M.D.

Associate Attending Pathologists

Dorothy H. Andersen, M.D.
Homer D. Kesten, M.D.
Fred Vance Lucas, M.D.
Wellington B. Stewart, M.D.

Associate Attending Neuropathologist

David Cowen, M.D.

Assistant Attending Pathologist

David M. Spain, M.D.

Assistant Neuropathologist

Mavis Kaufman, M.D.

PEDIATRICS

(Babies Hospital)

Director of Service

Rustin McIntosh, M.D.

Attending Pediatricians

Hattie E. Alexander, M.D.
William S. Langford, M.D.

Associate Attending Pediatricians

John M. Brush, M.D.
J. Taylor Howell, M.D.
**Katherine K. Merritt, M.D.
Conrad M. Riley, M.D.
Charles L. Wood, M.D.

Assistant Attending Pediatricians

Nathan W. Ackerman, M.D.
John B. Ahouse, M.D.
Harry S. Altman, M.D.
Rose G. Ames, M.D.
Sidney Blumenthal, M.D.
Lilian A. Boker, M.D.
Robert W. Culbert, M.D.
Douglas S. Damrosch, M.D.
Paul A. di Sant' Agnese, M.D.
Ruth C. Harris, M.D.
**Charles A. Lang, M.D.
Aildred A. Macdonald, M.D.
Ralph E. Moloshok, M.D.
Mary H. Samuels, M.D.
William A. Silverman, M.D.
Milton Singer, M.D.
Paul S. Strong, M.D.
Frederick H. von Hofe, M.D.
Agnes G. Wilson, M.D.
*Paul E. Wilson, M.D.
James A. Wolff, M.D.

Assistant Pediatricians

William A. Bauman, M.D.
Albert Jules Beckmann, M.D.
*Benjamin C. Berliner, M.D.
Saul Blatman, M.D.
Alexander Blum, Jr., M.D.
Hilde Bruch, M.D.
Lawrence Cassard, M.D.
Walter Mark Chemris, M.D.
Harvey Harold Corman, M.D.
Joseph A. Costa, M.D.
Ruth Alice Davis, M.D.
Adele Otis Dellenbaugh, M.D.
Carolyn Rebecca Denning, M.D.
Ruth Ursula Donovan, M.D.
Harlow D. Dunton, M.D.
Lavinia G. M. Fox, M.D.
Olga Frankel, M.D.
Alfred M. Freedman, M.D.
Oscar L. Frick, M.D.
Bernard German, M.D.
Rodman Gilder, Jr., M.D.
William Goldfarb, M.D.
Sylvia Preston Griffiths, M.D.
Melvin M. Grumbach, M.D.
James R. Guthrie, M.D.
Daniel C. Hackett, M.D.
William E. Homan, M.D.
Phoebe Hudson, M.D.
Martin H. Jacobs, M.D.
Jean D. Jameson, M.D.
Robert E. Jennings, M.D.
Joseph E. Kalbacher, M.D.
Walter R. Kessler, M.D.
John P. Lambert, M.D.
James H. Maroney, M.D.
Daniel Melia, M.D.
Kenneth M. Metcalf, M.D.
Rhoda M. Mickey, M.D.
Walter L. Mitchell, Jr., M.D.
Donald R. Reed, M.D.
Mary R. Richards, M.D.
Roderick C. Richards, M.D.
Albert P. Rosen, M.D.
Mabel Ross, M.D
W. Russell Smith, M.D.
Raymond Sobel, M.D.
Katherine Sprunt, M.D.
David Stiles, M.D.
Virginia Strong, M.D.
Elizabeth Ufford, M.D.
Virginia Van Geyt, M.D.
Robert West, M.D.
Robert C. Wheeler, M.D.
Daniel A. Wilcox, M.D.
Leo F. J. Wilking, Jr., M.D.
Virginia N. Wilking, M.D.

*Leave of Absence

**Inactive

Assistant Attending Pediatrician
Vanderbilt Clinic

Arthur F. Ackerman, M.D.

Assistant Pediatricians
Vanderbilt Clinic

Alfred L. Abrams, M.D.
Edward P. Duffy, Jr., M.D.
Samuel A. Edelman, M.D.
Rose Raquel Ellis, M.D.
Elizabeth Glogau Estrin, M.D.
Bertrand Etra, M.D.
Hyman H. Gordon, M.D.
George W. McCormick, M.D.
Thomas W. Patrick, Jr., M.D.
William H. Smith, M.D.
Hermann Vollmer, M.D.
William Wiley Whitten, M.D.

Resident

Peter R. Scaglione, M.D.

Assistant Residents

Mollie H. Allensworth, M.D.
Lionel M. Bargeron, Jr., M.D.
John S. Beresford, M.D.
Marguerite J. Gates, M.D.
Thurman B. Givan, Jr., M.D.
Herman Grossman, M.D.
Thomas B. Guyton, M.D.
Lissy F. Jarvik, M.D.
Charles M. McKean, M.D.
Robert W. Moncrieff, M.D.
Herbert E. Poch, M.D.
Jack G. Shiller, M.D.
Anneliese L. Sitarz, M.D.
Ernest M. Vandeweghe, M.D.
Stanley M. Vickers, M.D.

Clinical Fellows

Marvin L. Auerback, M.D.
John M. Bowman, M.D.
Clifford Golden, M.D.
James R. MacLean, M.D.
Garrison Rapmund, M.D.

Visiting Fellows

Claudia E. Cambria, M.D.
Selma Cooperman, M.D.
Esther Liang, M.D.
Morton H. Rachelson, M.D.
Alicia Ramirez, M.D.

PHYSICAL MEDICINE AND REHABILITATION

Director of Service

Robert C. Darling, M.D.

Attending Physician

William Benham Snow, M.D.

Assistant Attending Physicians

Cassius L. deVictoria, M.D.
A. David Gurewitsch, M.D.
Morton Hoberman, M.D.

Assistant Physician

Milos J. Lota, M.D.

Clinical Fellow

John A. Downey, M.D.

Visiting Fellows

Lucille Tsu, M.D.
Shyh Jong Yue, M.D.

PSYCHIATRY

Director of Service

Lawrence C. Kolb, M.D.

Attending Psychiatrists

George E. Daniels, M.D.
Irville H. MacKinnon, M.D.
Robert B. McGraw, M.D.

Associate Attending Psychiatrists

Viola W. Bernard, M.D.
William A. Horwitz, M.D.
Kenneth Kelley, M.D.
Ruth E. Moulton, M.D.

Assistant Attending Psychiatrists

Barbara Ruth Easser, M.D.
Lothar Gidro-Frank, M.D.
Charles C. Hogan, M.D.
Aaron Karush, M.D.
**John A. P. Millet, M.D.
Leon Moses, M.D.
Blaise A. Pasquarelli, M.D.
Walter A. Stewart, M.D.

Assistant Psychiatrists

Robert J. Campbell, M.D.
John W. Cederquist, M.D.
Max Cohen, M.D.
John Cook, M.D.
Alvin I. Goldfarb, M.D.
Joseph Lubart, M.D.
Angel N. Miranda-Rivera, M.D.
Charles Moffett, M.D.
Robert A. Senescu, M.D.

Associate Attending Psychiatrists
Vanderbilt Clinic

A. Louise Brush, M.D.
Roy D. Craig, M.D.
Lawson G. Lowrey, M.D.
Robert J. Mearin, M.D.
Alfred Schick, M.D.

**Inactive

William A. Schonfeld, M.D.
Martin Schreiber, M.D.
Sonia S. Stirt, M.D.
Edward S. Tauber, M.D.

Assistant Attending Psychiatrists
Vanderbilt Clinic

Alan B. Adam, M.D.
*Andre K. Allen, M.D.
Antonio M. Bottino, M.D.
William A. Brooks, M.D.
Elizabeth Lynn Bryan, M.D.
Edith M. Buyer, M.D.
Ralph J. Carotenuto, M.D.
Hyman Chartock, M.D.
Lilli Cobliner, M.D.
Donald B. Douglas, M.D.
Renatus Hartogs, M.D.
Herbert Holt, M.D.
George A. Jervis, M.D.
Milton Mazer, M.D.
Hugh McHugh, M.D.
Joost A. M. Meerloo, M.D.
Theodore Meltzer, M.D.
Philip Mertz, M.D.
Hugh Mullan, M.D.
John F. Oliven, M.D.
Percy E. Ryberg, M.D.
Leonard Scheinman, M.D.
Fred U. Tate, M.D.
Jacob Weinless, M.D.

Assistant Psychiatrists
Vanderbilt Clinic

John A. Frank, M.D.
George Lewis Lake, M.D.
Harold S. Leopold, M.D.
John J. Levbarg, M.D.
Camella A. Losada, M.D.
Jane B. Oldden, M.D.
*Eda L. Priest, M.D.
David M. Rudin, M.D.
Frederick M. Weissman, M.D.

Junior Assistant Psychiatrists
Vanderbilt Clinic

*Margaret M. Lawrence, M.D.
Seymour C. Post, M.D.

Residents

Truman Esau, M.D.
Bernard C. Holland, M.D.
John F. O'Connor, M.D.
James A. Reilly, M.D.
Joseph Schachter, M.D.
Robert J. Weiss, M.D.

Assistant Residents

Eugene G. Jacobs, M.D.
Daniel Justman, M.D.
Joanne Lloyd-Jones, M.D.
William C. Normand, M.D.

*Leave of Absence

PUBLIC HEALTH

Biostatistician

John W. Fertig, Ph.D.

Epidemiologist

Ray E. Trussel, M.D.

Parasitologist

Harold W. Brown, M.D.

RADIOLOGY

Acting Director of Service

Harold W. Jacox, M.D.

Attending Radiologist

John Caffey, M.D.

Assistant Attending Radiologists

Morton M. Kligerman, M.D.
Juan M. Taveras, M.D.
Josephine Wells, M.D.
Russell Wigh, M.D.

Assistant Radiologists

Meyer Alpert, M.D.
Donald J. Barnett, M.D.
Francis M. Cummins, M.D.
Catherine J. Dalton, M.D.
Kent Ellis, M.D.
James Luther Jarvis, M.D.
Donald W. Johnson, M.D.
Samuel H. Madell, M.D.
Joseph Mellen Moynahan, M.D.
Jerome Nadelhaft, M.D.
Louis A. Rottenberg, M.D.
Ralph Schlaeger, M.D.
Gerhart S. Schwarz, M.D.
Norah duV. Tapley, M.D.

Resident

James M. Monaghan, M.D.

Assistant Residents

Maurice L. Bogdonoff, M.D.
Alexander D. Crosett, Jr., M.D.
Robert A. Evans, M.D.
Ezekiel Freed, M.D.
David Hayes, M.D.
Ronald E. Herson, M.D.
Robert J. Hochstim, M.D.
Arthur I. Hutner, M.D.
Philip M. Johnson, M.D.
Albert F. Keegan, Jr., M.D.
Rob H. Kirkpatrick, M.D.
Eleanor Dino Montague, M.D.
E. Finch Parsons, M.D.
Robert Silbert, M.D.
Gene J. Triano, M.D.

Visiting Fellows
Cecil F. Baxter, M.D.
Melvin H. Becker, M.D.
Daniel D. Douglass, M.D.
Bekir S. Izmirli, M.D.
Andrew W. Koch, M.D.
Heinz Oeser, M.D.
Fred Thyng, M.D.

SURGERY

Director of Service
George H. Humphreys, II, M.D.

Attending Surgeons
Robert H. E. Elliott, Jr., M.D.
**Frank L. Meleney, M.D.
Milton R. Porter, M.D.
Rudolph N. Schullinger, M.D.
Lawrence W. Sloan, M.D.
Thomas W. Stevenson, Jr., M.D.
Robert H. Wylie, M.D.

Associate Attending Surgeons
Arthur H. Blakemore, M.D.
David C. Bull, M.D.
Henry S. F. Cooper, M.D.
Ralph A. Deterling, Jr., M.D.
Robert S. Grinnell, M.D.
Cushman D. Haagensen, M.D.
David V. Habif, M.D.
Harold D. Harvey, M.D.
Edward L. Howes, M.D.
Herbert C. Maier, M.D.
Ferdinand F. McAllister, M.D.
Richmond L. Moore, M.D.
Grant Sanger, M.D.

Assistant Attending Surgeons
Hugh Auchincloss, Jr., M.D.
Harold G. Barker, M.D.
George Francis Crikelair, M.D.
Jose M. Ferrer, Jr., M.D.
Charles W. Findlay, Jr., M.D.
Edmund N. Goodman, M.D.
Frederic Pratt Herter, M.D.
*Robert B. Hiatt, M.D.
Maurice J. Hickey, M.D., D.D.S.
Aaron Himmelstein, M.D.
David M. C. Ju, M.D.
John F. Prudden, M.D.
Robin M. Rankow, M.D.
Thomas V. Santulli, M.D.
John Scudder, M.D.
Edward B. Self, M.D.
Joseph Arthur Tamerin, M.D.
Philip D. Wiedel, M.D.

Assistant Surgeon
Daniel M. Shapiro, M.D.

Assistant Attending Surgeons
Vanderbilt Clinic
Charles H. C. Beakes, M.D.
Gordon McK. Stevenson, M.D.

Assistant Surgeons
Vanderbilt Clinic
Morris R. Bradner, Jr., M.D.
James R. Breed, M.D.
Ben Marr Lanman, M.D.
Stephen H. M. Plum, M.D.
D. Barton Stevens, M.D.
Alfred D. Young, M.D.

Attending Surgical Pathologists
Virginia Kneeland Frantz, M.D.
Raffaele Lattes, M.D.

Assistant Attending Surgical Pathologist
Nathan Lane, M.D.

Residents
Richard C. Britton, M.D.
Carl R. Feind, M.D.
Robert W. Holliday, M.D.
Sheldon M. Levin, M.D.
James R. Malm, M.D.
Frederick R. Randall, M.D.
Alberto Rigau, M.D.
J. Beall Rodgers, M.D.
Edgar A. Storli, M.D.
Lester L. Vargas, M.D.
Arthur B. Voorhees, Jr., M.D.
Sanford Weissman, M.D.
John M. Wilson, M.D.

Assistant Residents
Vincent W. Ansanelli, M.D.
Alfred Azzoni, M.D.
Carl M. Barlow, M.D.
David Blumenstock, M.D.
Harold T. Brew, Jr., M.D.
Robert Carlson, M.D.
Selden Dickinson, M.D.
Glendon C. Fraser, M.D.
John S. Hegeman, M.D.
Norman A. Hill, M.D.
Cyrus Houshmand, M.D.
George A. Hyde, Jr., M.D.
Julius H. Jacobson, M.D.
Henry W. Louria, Jr., M.D.
Alfred M. Markowitz, M.D.
Roy McKittrick, M.D.
John C. Norman, Jr., M.D.
Robert T. Potter, M.D.
Keith Reemtsma, M.D.
Anthony Shaw, M.D.
Robert Shaw, M.D.
Francis C. Symonds, M.D.
John C. Williams, Jr., M.D.

Clinical Fellow
Don Otto Gore, M.D.

*Leave of Absence
**Inactive

Interns
Ronald H. Allen, M.D.
Robert L. Beals, M.D.
John R. Benfield, M.D.
Joseph A. Buda, M.D.
Edward F. Conklin, M.D.
Alan W. Feld, M.D.
S. Ashby Grantham, M.D.
Frank E. Gump, M.D.
Harold Haft, M.D.
David J. Hosbein, M.D.
Thomas C. King, M.D.
Richard J. Kitz, M.D.
George Kleinfeld, M.D.
France A. Laux, M.D.
Alan C. Merchant, M.D.
Robert A. Salerno, M.D.
John N. Schullinger, M.D.
Frank J. Veith, M.D.
Erwin N. Whitman, M.D.
James Worcester, M.D.
Joseph P. Zawadsky, M.D.

Residents
Thoracic Surgery
Roy H. Clauss, M.D.
Howard Sirak, M.D.

Residents
Plastic Surgery
Lowyd Ballantyne, M.D.
Hector Barisone, M.D.
Orville J. Mirehouse, M.D.

Assistant Residents
Plastic Surgery
James A. Macdonald, M.D.
Martha M. MacGuffie, M.D.

Residents
Surgical Pathology
Sidney Z. Gellman, M.D.
W. Arthur Harland, M.D.

*Leave of Absence

Theophilus Roberts, M.D.
Frank P. Shepard, Jr., M.D.

UROLOGY

(J. Bentley Squier Urological Clinic)

Director of Service
John K. Lattimer, M.D.

Attending Urologist
George W. Fish, M.D.

Assistant Attending Urologists
Charles T. Hazzard, M.D.
John N. Robinson, M.D.

Assistant Urologists
*Stanley B. Braham, M.D.
J. Timothy Donovan, M.D.
Perry B. Hudson, M.D.
Meyer M. Melicow, M.D.
Murray B. Pincus, M.D.
Reginald F. Seidel, M.D.
Harry Seneca, M.D.
Thomas J. Sullivan, M.D.
Ralph J. Veenema, M.D.
*Ralph C. Yeaw, M.D.

Assistant Urologists
Vanderbilt Clinic
Frederick S. Dick, M.D.
*Robert Kollmar, M.D.
Stanford Pulrang, M.D.
Arthur T. Willetts, M.D.

Assistant Residents
Truman D. Boyes, M.D.
Archie L. Dean, Jr., M.D.
Clement A. Furey, Jr., M.D.
M. Eugene Speicher, M.D.
Robert D. Wickham, M.D.

Clinical Fellow
Aurelio Calvo Uson, M.D.

VANDERBILT CLINIC

CHIEFS OF CLINICS

Anesthesiology, Dr. Ernest Salanitre
Dermatology, Dr. J. Lowry Miller
Medicine (Group Clinic), Dr. Albert R. Lamb, Jr.
Neurology, Dr. Daniel Sciarra
Neurological Surgery, Dr. Lester A. Mount
Obstetrics and Gynecology, Dr. C. Paul O'Connell
Ophthalmology, Dr. Maynard C. Wheeler
Orthopedic Surgery, Dr. Halford Hallock
Otolaryngology, Dr. Franz Altmann
Pediatrics, Dr. William A. Bauman
Physical Medicine and Rehabilitation, Dr. Morton Hoberman
Psychiatry, Dr. Robert B. McGraw
Surgery, Dr. Philip D. Wiedel
Urology, Dr. Ralph J. Veenema

Appendix

APPENDIX

Statistics

BED COMPLEMENT, DECEMBER 31, 1955

	No. Beds	
PRIVATE:		
Presbyterian Hospital (Harkness Pavilion)	203	
Babies Hospital	10	
Eye Institute	19	
Neurological Institute	48	
Sloane Hospital	23	
Total Private		303
SEMI-PRIVATE:		
Presbyterian Hospital and Sloane Hospital:		
All Services (Harkness Pavilion)	97	
Medicine	9	
Surgery	14	
Urology	31	
Orthopedic	55	
Ear, Nose and Throat	21	
Gynecology	13	
Obstetrics	29	
Babies Hospital	30	
Eye Institute	36	
Neurological Institute	39	
Total Semi-Private		374
WARD:		
Presbyterian Hospital and Sloane Hospital:		
Medicine	112	
Dermatology	8	
Surgery	114	
Urology	36	
Orthopedic	67	
Ear, Nose and Throat	12	
Admitting	14	
Gynecology	35	
Obstetrics	81	
Babies Hospital (including premature nursery of 23 incubators)	152	
Eye Institute	37	
Neurological Institute	110	
Total Ward		778
		1,455
MARY HARKNESS CONVALESCENT HOME		57
		1,512
NEWBORNS		
(Sloane Hospital)		113
Total		1,625

HOSPITAL ADMISSIONS

	Admissions 1955	1954
PRIVATE:		
Presbyterian Hospital (Harkness Pavilion)	5,332	5,008
Babies Hospital	326	341
Eye Institute	530	516
Neurological Institute	958	1,044
Sloane Hospital	835	918
Total Private	7,981	7,827
SEMI-PRIVATE:		
Presbyterian Hospital and Sloane Hospital:		
All Services (Harkness Pavilion)	2,851	2,717
Medicine	168	239
Surgery	304	304
Urology	615	609
Orthopedic	803	673
Ear, Nose and Throat	608	606
Gynecology	490	562
Obstetrics	976	1,002
Babies Hospital	1,364	1,359
Eye Institute	1,398	1,244
Neurological Institute	942	881
Total Semi-Private	10,519	10,196
WARD:		
Presbyterian Hospital and Sloane Hospital:		
Medicine	1,746	1,721
Surgery	1,695	1,801
Urology	631	662
Orthopedic	1,094	1,176
Ear, Nose and Throat	896	958
Admitting	1,146	1,363
Gynecology	845	903
Obstetrics	3,743	3,522
Babies Hospital	2,866	2,655
Eye Institute	1,002	1,107
Neurological Institute	1,774	1,814
Total Ward	17,438	17,682
MARY HARKNESS CONVALESCENT HOME	796	724
Total	36,734	36,429
INFANTS BORN IN SLOANE HOSPITAL:		
Private beds	501	513
Semi-private and Ward beds	3,442	3,328
Total	3,943	3,841

HOSPITAL OCCUPANCY

	Patient Days Care		*Percentage of Occupancy*	
	1955	*1954*	*1955*	*1954*
PRIVATE:				
Presbyterian Hospital (Harkness Pavilion)	66,442	62,973	95.9	92.8
Babies Hospital	1,178	1,681	32.8	51.2
Eye Institute	5,100	5,289	73.5	76.3
Neurological Institute	15,923	15,386	90.9	87.8
Sloane Hospital	6,986	7,550	62.0	60.8
Total Private	95,629	92,879	88.1	86.0
SEMI-PRIVATE:				
Presbyterian Hospital and Sloane Hospital:				
All Services (Harkness Pavilion)	28,887	27,361	82.4	77.3
Medicine	4,263	5,546	73.1	95.0
Surgery	4,902	4,820	95.9	94.3
Urology	6,514	7,027	57.6	62.1
Orthopedic	12,227	10,607	83.7	81.0
Ear, Nose and Throat	2,551	2,932	77.4	89.3
Gynecology	4,296	5,228	94.3	110.2
Obstetrics	7,621	7,791	72.0	73.6
Babies Hospital	9,360	9,141	85.5	83.5
Eye Institute	10,683	8,591	81.3	75.3
Neurological Institute	13,136	12,993	92.3	91.3
Total Semi-Private	104,440	102,037	81.1	81.0
WARD:				
Presbyterian Hospital and Sloane Hospital:				
Medicine	38,205	38,390	90.2	90.7
Surgery	34,592	34,630	83.1	83.2
Urology	11,809	12,005	89.9	91.4
Orthopedic	22,674	26,300	74.9	82.7
Ear, Nose and Throat	5,233	5,836	59.8	66.6
Admitting	2,586	2,658	50.6	52.0
Gynecology	10,802	12,164	84.6	95.2
Obstetrics	26,036	25,099	88.1	84.9
Babies Hospital	39,439	36,794	71.1	66.3
Eye Institute	8,565	9,727	63.4	63.9
Neurological Institute	37,444	34,988	82.8	77.3
Total Ward	237,385	238,591	79.7	79.2
MARY HARKNESS CONVALESCENT HOME	16,204	15,615	77.9	75.1
Total	453,658	449,122	81.6	80.8
INFANTS BORN IN SLOANE HOSPITAL:				
Private beds	4,018	4,359	30.8	29.9
Semi-private and Ward beds	23,581	23,091	71.8	70.3
Total	27,599	27,450	60.1	57.9

OUT-PATIENT DEPARTMENT STATISTICS

	1955	*1954*
Summary of Patients Treated:		
Number of Patients treated	54,559	56,430
Number of visits:		
Free	115,042	110,762
Pay	300,113	294,875
Total	415,155	405,637
Average visits per working day	1,647	1,528

Attendance Statistics:	*New to Clinics*	*Revisits*	*Total Visits*
Dermatology	5,437	31,629	37,066
Emergency and Admitting Wards	23,004	709	23,713
Group Clinic	4,122	21,726	25,848
Medicine	8,109	38,597	46,706
Neurology	2,606	14,871	17,477
Obstetrics and Gynecology	6,049	35,441	41,490
Occupational Therapy	77	901	978
Ophthalmology	5,076	23,231	28,307
Orthopedic	13,781	30,774	44,555
Otolaryngology	3,887	14,422	18,309
Pediatrics	6,131	43,328	49,459
Physical Therapy	1,590	14,898	16,488
Psychiatry	305	3,946	4,251
Surgery	18,337	32,825	51,162
Urology	1,450	7,896	9,346
Total	99,961	315,194	415,155

PERSONNEL STATISTICS

	On Duty December 31	
	1955	*1954*
Administration	13	17
Assistant Secretary-Treasurer	42	42
Comptroller	90	92
Public Interest	12	11
Convalescent Home	41	43
Non-Professional Services:		
Buildings and Grounds	570	580
Food Service	371	373
Personnel and Protective	70	67
Other Non-Professional Services	171	171
Professional Services:		
Nursing	1,181	1,161
Professional Staff, Doctors' Offices & Research	392	377
Vanderbilt Clinic and Special Services	666	647
Total	3,619	3,581
Student Nurses	485	457
Volunteer Workers	353	344

THE ALUMNAE ASSOCIATION OF THE SCHOOL OF NURSING OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK, INC.

BALANCE SHEET, DECEMBER 31, 1955 AND 1954

ASSETS

	1955	*1954*
Capital Funds—securities and cash	$661,586.93	$501,060.09
Operating Funds—securities, cash, etc.	11,905.35	12,044.47
Total Assets	$673,492.28	$513,104.56

LIABILITIES

Capital Fund Reserves:		
General fund	$ 9,526.77	$ 8,910.33
Benefit fund	143,594.35	136,586.03
Pension fund	456,775.89	309,400.13
Emma B. Kennedy Scholarship fund	24,122.48	22,871.56
Memorial Scholarship fund, '20	2,313.02	2,239.14
Helen Young Scholarship fund	22,732.36	18,877.68
Richard William Walsh Scholarship fund	1,323.16	1,184.15
Ruth C. Williams Scholarship fund	1,198.90	991.07
Total capital fund reserves	$661,586.93	$501,060.09
Operating Funds Reserves	$ 11,905.35	$ 12,044.47
Total Liabilities	$673,492.28	$513,104.56

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS

Cash on hand January 1	$ 5,511.04	$ 7,309.23
Receipts:		
Sale of securities	$ 44,403.31	$ 19,395.90
Investment income	30,386.98	24,855.03
Legacy—Estate of Edith Joy Field	53,000.00	
Donations	9,320.12	7,828.98
Dues and initiation fees	9,905.97	10,061.99
Dinner to graduating class	402.00	361.00
Loans repaid, etc.	720.67	790.69
Total Receipts	$148,139.05	$ 63,293.59
	$153,650.09	$ 70,602.82
Disbursements:		
Purchase of securities	$108,520.88	$ 23,670.02
Clerical expense and fees	4,384.00	4,239.50
Pensions and benefits paid	14,750.00	15,465.00
Scholarship granted	3,943.33	4,966.66
Loans granted	100.00	
Donations	2,000.00	200.00
Printing, stationery and postage	6,609.22	13,207.68
Entertainment of graduating class	2,124.28	2,000.97
Miscellaneous	1,054.03	1,341.95
Total Disbursements	$143,485.74	$ 65,091.78
Cash on hand December 31	$ 10,164.35	$ 5,511.04

HELEN YOUNG,
Treasurer

BABIES HOSPITAL BOARD OF WOMEN MANAGERS

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE AUXILIARY FOR THE YEARS 1955 AND 1954

	1955	*1954*
Balance, January 1	$ 165.15	$ None
Receipts:		
Membership dues	$ 515.00	$ 435.00
United Hopital Fund	5,175.03	5,256.24
Greater New York Fund	6,223.97	5,816.76
Total Receipts	$11,914.00	$11,508.00
	$12,079.15	$11,508.00
Disbursements:		
To Babies Hospital for:		
Emergency Nursing	$ 4,800.00	$ 5,000.00
Pediatric Psychiatric Clinic	1,500.00	1,500.00
Recreational Therapy	4,500.00	4,500.00
Volunteer Service	500.00	
Decorations, furniture and equipment, etc.	455.00	314.25
Miscellaneous	77.52	28.60
Total Disbursements	$11,832.52	$11,342.85
Balance, December 31	$ 246.63	$ 165.15

JULIA M. THIERIOT,
Treasurer

BABIES HOSPITAL BOARD OF WOMEN MANAGERS

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE CRIBSIDE SOCIAL SERVICE COMMITTEE FOR THE YEARS 1955 AND 1954

	1955	*1954*
Balance, January 1	$ 309.69*	$ 1,732.95*
Receipts:		
Membership dues	$	$ 150.00
Donations	5.00	51.00
United Hospital Fund	7,057.27	7,326.36
Greater New York Fund	8,487.73	8,107.64
Investment income	656.78	602.68
Bargain Box Thrift Shop	6,465.00	1,869.04
Nearly New Shop		303.84
Sewing Class dues and receipts	532.77	487.59
Repayments by patients of advances and loans	1,052.50	913.50
Total Receipts	$24,257.05	$19,811.65
	$23,947.36	$18,078.70
Disbursements:		
Social service salaries	$16,085.48	$15,351.00
Travel of social service staff	77.02	107.87
Conference expenses, dues, subscriptions and meetings	193.77	78.66
Convalescent care	1,141.92	785.96
Advances to patients for convalescent care and miscellaneous loans	1,052.50	913.50
Relief assistance and extra for patients:		
Clothing	1,056.65	775.13
Milk and food	190.46	109.60
Christmas and Thanksgiving	256.05	187.13
Other	43.09	25.62
Miscellaneous	2.50	53.92
Total Disbursements	$20,099.44	$18,388.39
Balance, December 31	$ 3,847.92	$ 309.69*

EDITH B. FENNELLY,
Chairman

* Overexpended

THE NEUROLOGICAL INSTITUTE AUXILIARY OF THE BOARD OF TRUSTEES OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1955 AND 1954

	1955	*1954*
Balance, January 1	$31,380.42	$21,180.94
Receipts:		
Donations	$ 2,217.00	$ 1,741.00
United Hospital Fund	10,893.34	11,274.83
Greater New York Fund	13,101.66	12,477.17
Everybody's Thrift Shop	10,585.52	9,279.07
Repayments by patients of advances and loans	593.60	716.00
Total Receipts	$37,391.12	$35,488.07
	$68,771.54	$56,669.01
Disbursements:		
Social service salaries	$25,105.53	$21,367.84
To Neurological Institute for:		
Library	1,200.00	100.00
Volunteer service	1,900.00	
Advances to patients for summer therapeutic care and miscellaneous	593.60	716.00
Summer therapeutic care	1,246.90	1,524.00
Chronic care	115.52	129.40
Convalescent care	12.00	
Medical relief	888.22	721.10
Recreation of patients	5.59	15.19
Staff travel, field and conference	37.01	137.67
Miscellaneous, postage, telephone and publications	410.80	577.39
Total Disbursements	$31,515.17	$25,288.59
Balance, December 31	$37,256.37	$31,380.42

KATHERINE G. FENIMORE COOPER,
Chairman

THE WOMEN'S AUXILIARY NEW YORK ORTHOPAEDIC DISPENSARY AND HOSPITAL OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1955 AND 1954

	1955	*1954*
Balance, January 1	$ 3,439.78	$ 2,783.57
Receipts:		
Donations	$ 5,492.94	$ 650.00
Allocation from United Hospital Fund and Greater New York Fund Distribution	4,000.00	4,000.00
Total Receipts	$ 9,492.94	$ 4,650.00
	$12,932.72	$ 7,433.57
Disbursements:		
Recreational therapist salary	$ 2,626.00	$ 3,168.98
Other recreational therapy expenses	820.50	824.81
Library	700.00	
Volunteer service	1,100.00	
Total Disbursements	$ 5,246.50	$ 3,993.79
Balance, December 31	$ 7,686.22	$ 3,439.78

PAMELA F. FURSE,
Treasurer

WOMEN'S AUXILIARY OF THE BOARD OF TRUSTEES OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEARS 1955 AND 1954

	1955	*1954*
Balance, January 1	$ 6,509.74	$ 7,932.33
Receipts:		
Membership dues	$ 652.50	$ 580.00
United Hospital Fund	6,920.17	7,097.56
Greater New York Fund	8,322.83	7,854.44
Donations	285.30	182.90
Stuyvesant Square Thrift Shop	3,858.06	3,389.28
Total Receipts	$20,038.86	$19,104.18
	$26,548.60	$27,036.51
Disbursements:		
To Presbyterian Hospital for:		
Occupational Therapy	$ 6,000.00	$ 6,000.00
Library	5,808.90	4,160.00
Volunteer Service	8,300.00	6,999.26
Furnishings for Women's Lounge		2,762.18
Miscellaneous	543.62	605.33
Total Disbursements	$20,652.52	$20,526.77
Balance, December 31	$ 5,896.08	$ 6,509.74

AUDREY B. SCHULLINGER,
Treasurer

(1) A gift of $10,000 shall entitle the donor to nominate a patient to use and occupy one bed in the common wards of the Hospital free of charge (except for special service) for not more than ninety days in any one year.

The donor may at the time of making the gift appoint to another in his stead such right to nominate, provided the appointee is acceptable to the Hospital.

Such right to nominate may be exercised only:—

(*a*) During the life of the person having the right to nominate, if such right is in an individual.

(*b*) For a period of fifteen years, if such right is in a Corporation, Society or Association.

(2) Endowed Bed privileges are subject to all rules and regulations governing the admission, treatment, and discharge of patients.

(3) The Board of Trustees may in their discretion under special circumstances accept gifts for the endowment of beds on such other terms and conditions as they may deem best calculated to promote the objects for which the Hospital was established and is maintained.

Memorial Endowed Beds for Research Purposes

A gift of $10,000 shall entitle the donor to establish as a permanent memorial one memorial endowed bed for research purposes in a ward of the Hospital to be used and occupied by patients free of charge, except for special service.

The President of the Medical Board shall, subject to the approval of the Vice-President and General Manager of the Hospital have the privilege of nominating patients to use and occupy a Memorial Endowed Bed for Research Purposes for not more than 90 days in any one year for a period of 15 years, subject to all rules and regulations governing the admission, treatment and discharge of patients. This privilege shall be assigned to the persons occupying these respective offices (President of the Medical Board and Vice-President and General Manager of the Hospital) at the time the nomination is made.

ENDOWED BEDS AND ROOMS

Presbyterian Hospital

1868 Mary J. Gelston
1870 Henrietta A. Lenox (2 Beds)
Washington R. Vermilyea
A. R. Wetmore
1871 John Laurie
Mary Ann Parish
1872 William Earl Dodge
John T. Johnston
Otis D. Swan
Henry Young (2 Beds)
1873 James Brown (2 Beds)
John R. Ford
Jonathan Sturges
1878 James G. and Henry G. deForest, in memory of Lockwood deForest Woodruff, M.D.
1880 William C. Rhinelander
1881 Jennet L. and Robert L. Belknap, in memory of Aaron B. Belknap
Fifth Avenue Presbyterian Church
Henry B. Hyde, in memory of his son, Henry B. Hyde, Jr.
John Stewart Kennedy
Frederick and Henry G. Marquand

Edwin D. Morgan (3 Beds)
Mary L. Sheafe
John L. Proudfit
1882 Heber R. Bishop (3 Beds)
Mrs. Robert L. Stuart, in memory of her father, Robert McCrea
Edwin D. Morgan
Mrs. Moses Taylor
1883 Frederick Billings
Reformed Protestant Dutch Church of the City of New York
1884 Nathaniel W. Conkling
West Presbyterian Church, to be known as "Faith Presbyterian Church Bed"
Madison Square Presbyterian Church, in memory of George W. Lane
1885 Brick Presbyterian Church, in memory of Dr. John G. Adams
Richard Irvin
1886 Frederick Baker, in memory of Sarah Pyewell Baker
Edward L. Beadle
Brick Presbyterian Church, in memory of Miss Ann Adams
Fourth Avenue Presbyterian Church Bed by Peter Cumming, in memory of Francis P. Schoals
George E. Dodge
Horace F. Hutchinson, in memory of Ellen B. Schoals
Mr. and Mrs. William D. Sloane, in memory of their son, William D. Sloane, Jr.
Henry S. Wilson, in memory of his son, Harry H. Wilson
1887 Fifth Avenue Presbyterian Church
1888 Broadway Tabernacle Society
Samuel Inslee, in memory of Kate J. Inslee
1889 John Sloane, in memory of his mother, Euphemia Sloane
1890 Isaac V. Brokaw, in memory of Ernest B. Brokaw
Sidney Dillon, in memory of Hannah Dillon
Ambrose K. Ely
Josiah M. Fiske
O. B. Jennings
Mrs. John Stewart Kennedy
Amelia Kerr
Robert Marshall
Elizabeth S. and Emily M. Wheeler, in memory of James Boorman
"The Davenport Bed"
1891 Sarah A. Havemeyer, in memory of her son, Hector C. Havemeyer
Thomas Hope
John E. Parsons, in memory of his children, E. L. P., K. M. P., and R. M. P.
Mrs. A. R. Van Nest, in memory of her husband, Abram R. Van Nest
1892 John Stewart Kennedy, in memory of his niece, Emma Stewart Baker
Alexander Maitland, in memory of his mother, Mary C. Maitland
1893 Maria S. Auchincloss, in memory of her husband, Edgar S. Auchincloss
Frances T. Lord, in memory of her husband, George deForest Lord
Presbyterian Church on University Place
Presbyterian Home for Aged Women
Margaret A. Sinclair, in memory of Mr. and Mrs. James Sinclair
West-Park Presbyterian Church
Young Men's Christian Association
1895 Mary Harrison
Mrs. Clarence M. Hyde, in memory of her mother, Rebecca Babbitt
John Stewart Kennedy, in memory of Mrs. Robert L. Stewart
Mrs. James T. Murray, in memory of her husband, James T. Murray
1896 Anthony Dey, in memory of Joseph G. and Eliza D. Scott
Jane Hope
Esther J. Jennings, in memory of her husband, Oliver B. Jennings
1897 Mrs. Francis E. Baker, in memory of her father, James Rich Steers
William S. Brown
Helen Miller Gould, in memory of her parents, Mr. and Mrs. Jay Gould
Margarette E. and Susan D. Griffith, in memory of their father, Griffith W. Griffith

Mary J. Griffith, in memory of her husband, Griffith W. Griffith
Rachel L. Kennedy, in memory of her mother, Mrs. Rachel C. Kennedy
Annie S. Paton, in memory of her husband, William Paton
Charlotte H. Skidmore, to be known as "The William L. Skidmore Bed"

1898 Brick Presbyterian Church
Matilda A. Brown, in memory of her son, H. Auchincloss Brown
First Presbyterian Church
Mrs. Stephen V. Harkness, in memory of her daughter, Florence Harkness
Jane Hope, in memory of her mother, Grace Corrie Hope
John Stewart Kennedy, in memory of Rev. William G. Schauffler, D.D., L.L.D.
Mrs. Elliott F. Shepard, in memory of her daughter, Florence Vanderbilt Shepard
Mrs. Elliott F. Shepard, in memory of her daughter, Marguerite Shepard

1899 William W. Cole, in memory of his mother, Mary A. Cole
William Whitewright, in memory of his father, William Whitewright, "The Whitewright Beds" (10 Beds)

1900 Emily B. Hopkins, in memory of her husband, Moses Hopkins, "Moses Hopkins Memorial"
Donald MacKay, in memory of his children, Edith Winslow and Walter Wisc MacKay
Caroline L. Macy, in memory of her daughter, Mary M. K. Willets
Laura Roome, in memory of her sons, Harry and Alfred Roome
Martha L. St. John, in memory of her mother, Sarah Ward
Nathaniel Whitman

1901 Julia Billings, in memory of her husband, Frederick Billings
Camilla L. Edwards, in memory of her husband, Walter Edwards
Andrew J. Garvey, in memory of his mother, Elizaheth Jeffries Garvey (2 Beds)
George Lauder
Charles H. Marshall
Justine Adele Stafford, in memory of her father, Justin A. Bliss

1902 Rohert Graham Dun
Margaret J. Plant, in memory of her brother, Simon Loughman

1903 Heber R. Bishop
Lura Currier
Mrs. Francis B. Harrison
Julia J. MacCartee, in memory of her husband, Rohert MacCartee
Madison Avenue Reformed Church
Adela Berry Sloane, in memory of her father, Ahraham J. Berry, M.D.
Justine Adele Stafford, in memory of her mother, Eveline C. Bliss
John T. Terry

1904 Virginia E. Fowler, in memory of Clarence E. Fowler
Susan Bevier
Mrs. William Starr Miller
Josephine Penfold, in memory of Dr. Edward Livingston Trudeau, Jr.
Peter Reid, in memory of his wife, Jane Watson Reid
Francis A. Palmer

1905 Frederick G. Bourne
Helen C. Inslee, in memory of her husband, Samuel Inslee
Titus B. Meigs, in memory of his son, Titus B. Meigs, Jr.
Mrs. James T. Murray, in memory of Rev. John Hall, D.D., L.L.D,
Sarah J. Parsons, in memory of her husband, Charles Parsons
Presbyterian Church on University Place

1906 Maria L. Camphell, in memory of Henry Pearsall Campbell
Susan W. Duncan, in memory of her husband, John P. Duncan
Samuel Keyser (3 Beds)
Sara Pyle McAlpin and James Tolman Pyle, in memory of their father, William Scott Pyle
Reformed Protestant Dutch Church of Garden Street
John Sloane, in memory of his brother, Thomas Chalmers Sloane
John Sloane, in memory of his father, William Sloane

1908 William R. Craig, in memory of his sister, Florence Faxon Craig
George B. Goldschmidt, in memory of his mother, Celestine Goldschmidt

Samuel Anthony Goldschmidt, in memory of his mother, Celestine Goldschmidt
Mrs. Stephen V. Harkness, in memory of her husband, Stephen V. Harkness
Charles H. Marshall, Jr.

1909 Rev. and Mrs. Robert Russell Booth, in memory of "Minnie and Willie"
Canadian Society of New York
Edward West Currier, in memory of his stepmother, Laura Currier
Edward West Currier, in memory of his stepbrother, Walter B. Currier
Edward West Currier, in memory of Edward W. Currier
Mary Jane Johnson, in memory of her husband, William H. Johnson
J. Theresa Keyser, in memory of her husband, Samuel Keyser
Julia Hannon Lyle
Winfield Tucker, in memory of Joseph, Isabelle and Adeline (3 Beds)
J. Spencer Turner, in memory of his first wife, Cornelia J. Turner

1910 Jane A. Townsend, in memory of her son, Randolph W. Townsend, Jr.
Jane A. Townsend, in memory of her son, Harmon W. Norton
Jane A. Townsend, in memory of her daughter, Emma L. Norton
Amelia Mott Graham, in memory of Malcolm Graham
Adeline Ives Latham, in memory of her husband, John Howard Latham
Josephine G. Lord, in memory of her husband, Franklin B. Lord

1911 Brearley School Girls and others interested, in memory of Madam Bertha Beck, "Madam Beck Memorial Teacher's Bed"
Harriet Coles, in memory of her sisters, Susan and Anna Codman
Caroline Thorn Kissel, in memory of her husband, Gustav Edward Kissel
Katherine Spencer Leavitt, in memory of her husband, Rev. William Leavitt (2 Beds)
Reformed Low Dutch Church of Harlem
Frederick Sturges, in memory of his father, Jonathan Sturges
William Stuart Tod, in memory of his brother, George Tod

1912 Melville de Wolf, in Children's Ward, "Emma de Wolf Bed"
Gustavia A. Senff, in memory of her husband, Charles A. Senff

1913 Mrs. Christopher M. Bell, "The Dennistoun Bed"
Cornelia Eaton, to be known as "The Dr. Reuben S. Carpentier Memorial" (3 Beds)
Mrs. Jeremiah V. Meserole, in memory of her son, Abraham Meserole
Josephine Penfold
Jane G. Phelps, in memory of her husband, Anson G. Phelps, Jr. (2 Beds)

1914 Hugh D. Auchincloss, in memory of his mother, Elizabeth Auchincloss
Jane Elizabeth Grannis, in memory of her mother, "Charlotte Williams Platt Bed"
William H. Penfold, in memory of Josephine Penfold
Louise Tillinghast, in memory of her sister, Amelia C. Babcock
Minnie Hackett Trowbridge (6 Beds)

1915 A Friend, in memory of Sophia Kellogg Stebbins and Mary Tompkins Kimball
A Friend
Mrs. Jeremiah V. Meserole, in memory of her father-in-law, Abraham Meserole
Mrs. Jeremiah V. Meserole, in memory of her husband, Jeremiah Vanderbilt Meserole
Mrs. Jeremiah V. Meserole, in memory of her brother, Adolphus Clock
Mrs. Jeremiah V. Meserole, in memory of her parents, Alfred and Anna Maria Clock

1916 Emil C. Bondy, in memory of Margaret Carson Cowan
Central Presbyterian Church
Mr. and Mrs. James Petrie Chalmers, in memory of James Petrie Chalmers, Jr. "Chalmers Memorial Bed"
Robert A. Chambers, in memory of his father, Robert Chambers
Dunlevy Milbank, in memory of his mother, Ella Dunlevy Milbank
William D. Sloane (3 Beds)

1917 Emeline Y. Danforth, in memory of Mrs. William B. Jenkins
Harris Brisbane Dick, to be known as the "Harris Brisbane Dick Free Bed"
Sarah C. Miller
Albert Winter, in memory of Adaline Benson Winter

1918 Ida Leora Olmstead, to be known as "Leora McCammon Bed"

1919 Samuel Elliott
Elizabeth Keys, in memory of her daughter, Edith Keys
Rutgers Presbyterian Church
James R. Steers, in memory of his former wife, Rebecca E. Steers
John W. Sterling
1920 William C. Boschen, to be known as the "Boschen Bed"
Rosa Franklin (4 Beds)
Francis P. Furnald
Mrs. Francis P. Furnald
Mary A. Harriot, to be known as the "Margaret Harriot Alms"
Mary A. Harriot, to be known as the "James Harriot Alms"
Mrs. Henry O. Havemeyer, in memory of her parents, George William and Matilda Adelaide Elder
Margaret J. Orr, in memory of her mother, Ann Boyd Orr
Anna St. John, in memory of her brother, Milton St. John
1921 Mrs. Peter B. Wyckoff, to be known as the "Sidney Dillon Bed"
Henry M. Gescheidt
Ralph E. Prime, in memory of his daughter, Ruth Havens Prime
Joseph K. Gwynn
Charles S. Ward, in memory of his friend, Sophie L. Kinman
Charles S. Ward
1922 Minetta C. Howenstine (8 Beds)
Christina C. Munro, in memory of her husband, John Munro
Anna M. Romaine, in memory of Dr. William I. Detmold
Arnold Thayer (2 Beds)
Hamilton B. Tompkins, in memory of his wife and himself
1923 Lydia Augusta Brown
Josephine Newman Hall
1924 Bohemian Society "Lidumil"
Cordelia F. Turrell
Nannie Gyles Johnson (Children's Ward), in memory of her son, Shirley Everton Johnson
Mrs. William John Fitzgerald
1925 Christina Bond
In memory of Julia C. Skidmore
George Clarke
Elizabeth J. Hofer (2 Beds)
In memory of Catherine Parke and Horatio C. Kretchmar
Edward M. Morgan Memorial Association (4 Beds)
In memory of Edward M. Morgan
Jennette Robertson, to be known as "Helen C. Inslee Endowed Bed"
1926 Elizabeth Ellen Auchincloss, to be known as "E. E. Auchincloss, Jr. Bed"
Members of the New York Stock Exchange, to be known as the Seymour LeGrande Cromwell Memorial (2 Beds)
Edmund Penfold (2 Beds), in memory of Josephine Penfold and William Hall Penfold
Dr. M. Allen Starr, in memory of Allen Egbert Starr
John B. Trevor, in memory of Emily N. Trevor
West End Collegiate Church
George D. Widener
1927 Second Presbyterian Church in the City of New York
Ellen Mills Borne, in the Children's Ward, two beds to be known as "John E Borne Bed" and "Nellie M. Borne Bed"
Virginia Marquand Monroe, in the name of the Young Men's Christian Association
Mrs. Charles H. Senff, to be known as "Dr. George A. Tuttle Bed"
W. Frazer Gibson, in memory of his mother, Jeanette Frazer Gibson, to be known as "Jeanette Frazer Gibson Bed"
Augustus C. Gurnee, two beds in memory of his mother, Mary M. Gurnee
Eliza V. Nicholson
Mrs. Murray W. Dodge and Mrs. Franklin Lord, in memory of their mother, Mrs. Fordyce D. Barker (Single Ward Room)
Dunlevy Milbank (Single Ward Room)

F. Ethel Wickham, in memory of her father, William Hull Wickham, to be known as "William Hull Wickham Bed" (Single Ward Room)
Anna A. Johnston, in memory of her parents, William G. and Adriana C. Gardner
Anna A. Johnston, in memory of Lewis, Anna, Edward and Mary Johnston (Single Ward Room)
Broadway Presbyterian Church, to be known as the "Walter Duncan Buchanan Bed"
1928 North Presbyterian Church
In memory of McKevers Bayard Brown (Single Ward Room)
Caroline B. Sellew (4 Beds)
Red Cross Rooms for Nurses (3 Single Ward Rooms)
Robert W. deForest (Single Ward Room)
Henry W. deForest (Single Ward Room)
James R. Steers
Jane Livingston Armour, in memory of John A. Livingston
Jane Livingston Armour, in memory of Herman O. Armour
In memory of Meredith Howland Pyne
Stella C. and Roi C. Megrue (Single Ward Room)
Mrs. E. C. Wills, in memory of her mother, Mrs. J. F. Ackerman, and her sister, Mrs. W. Clarence Reed
1929 Caroline White, in memory of her sister, Eliza W. White
Elizabeth A. Hays, in memory of William and Charlotta Hays
1930 Mr. and Mrs. Ernest Trow Carter
The Presbyterian Church in the Town of Rye, N. Y.
Mrs. Arthur E. Lauderbach, in memory of her mother and father, Esther Hull Jackson and Peter A. H. Jackson
Mary L. Walker Peters, to be known as "The Charles Grenville Peters and Mary Walker Peters Free Bed"
Marie F. Coddington, to be known as "The Emilie Coddington Bed"
1931 Mrs. Clara Beales Obrig, in memory of Adolph Obrig and Clara Beales Obrig (Single Ward Room)
Alfred V. Meserole, in memory of his mother, Evelina A. Meserole
1932 In loving memory of Justine Adele Stafford (Mrs. W. F. Stafford) by her sister, Ida Evelina Bliss
1933 Mrs. John A. Hance and Mrs. Irene Louise Hance, in memory of James R. Jesup
1934 Ida Adams, in memory of her sister, Sadie E. and her brother, Robert F. Adams (Single Ward Room)
Josephine Leypoldt, in memory of her brothers, Louis and Frederick Leypoldt (2 Beds)
1935 Walter J. M. Donovan, in memory of his father, Timothy Donovan
1936 Elizabeth P. Hewes, to be known as "The Elizabeth P. Hewes Bed"
Dunlevy Milbank, in memory of his mother, Ella Dunlevy Milbank
Mary S. Thayer, to be known as "The Orlando Thayer Bed"
1937 Margaretta J. Gamble, to be known as "The Gamble Bed," in memory of her father and mother
Jeremiah Milbank, in memory of his father, the late Joseph Milbank
1938 Susetta L. Goss, to be known as "The Goss Bed," in memory of her parents, Rev. C. C. Goss and Theodosia C. Goss
Annie Miller, to be known as "The Mrs. Alexander Miller Memorial Bed," in memory of her mother, Mrs. Alexander Miller
Bertha H. Minturn, in memory of her most faithful and beloved nurse, Mary Humphries
Henry T. Sloane, to be known as "The Euphemia Sloane Coffin Bed," in memory of his sister Euphemia Sloane Coffin
1939 "In Memoriam"
Dunlevy Milbank, in memory of his mother, Ella Dunlevy Milbank
1940 George Gibbs, to be known as "The George Gibbs Bed"
1942 Mrs. Huntington McLane, to be known as the "Therese K. Thorne Bed," in memory of her mother
Cornelia Livingston Pell, in memory of Alfred Duane Pell
Frank Wallach, in memory of Ida May Wallach

1943 Stuart Duncan, to be known as "The Stuart Duncan Bed"
1944 Anonymous, to be known as "The Dr. William Darrach Bed"
John Fraser, in memory of his parents, Alexander and Elizabeth Fraser
1945 Robert W. Carle, in memory of his mother, to be known as the "Cornelia Willets Carle Bed" for general hospital use including harelip and cleft palate cases
1947 W. and J. Sloane
Frederick Sturges, Jr., Mrs. Mary Armit Sturges, Mrs. Catharine Armit Chapman and Frederick Sturges, III, in memory of Frederick Sturges
Walter S. Gifford, in memory of his son, Walter Sherman Gifford, Jr.
Ida L. Darling, known as the "Richards Memorial Bed"
John Sloane, in memory of his wife, Elsie Nicoll Sloane, to be known as the "Elsie Nicoll Sloane Bed"
Elisa Smith Mabon, in memory of her husband, James Brown Mabon
1948 Otto M. Eidlitz, to be known as the "Eidlitz Bed"
1949 Effie B. Shearman
1950 Isabel Shields Kemp, to be known as "Mary M. Shields and the Dr. Robert Coleman Kemp Free Bed"
1951 Gerrish Hill Milliken
1952 William Dzus, to be known as the "Ukrainian Institute of America, Inc. Bed"
1953 Estate of Charlotte C. Garretson, to be known as the "Charlotte Higbee Kelsey Bed"
W. Alton Jones Foundation, Inc., to be known as the "Nettie Marie Jones Bed"
1954 Estate of M. Samuel Stern to be known as the "M. Samuel Stern Memorial"
1955 Robert J. Eidlitz to be known as the "Marc Eidlitz Bed"
Mrs. John S. Holbrook, in memory of her parents John Johnston and Mary Sloane Sinclair

Memorial Endowed Beds for Research Purposes

1948 Mrs. William Barclay Parsons, in memory of her husband, William Barclay Parsons
Muriel Jane Rudinger Foundation, Inc., to be known as the "Muriel Jane Rudinger Bed"
1950 Charles E. Culpeper Foundation, Inc. (2 Beds)
1952 John F. Bush Memorial Bed
Estate of Selma Boyd, two beds each to be known as a "Boyd Bed"
Bruce Barton, in memory of his wife, to be known as the "Esther Randall Barton Memorial Bed"
1953 Herman Goldman Foundation, Inc., in memory of Theresa and Frank Goldman
W. Alton Jones Foundation, Inc., in memory of Mamie W. Marvin
1954 Mr. and Mrs. Charles P. Cooper, in memory of Mrs. Cooper's father, Doctor Charles Lathrop Parsons
John Shepard Parke Memorial Bed
Mr and Mrs. Sidney J. Weinberg, in memory of their parents
1955 Bruce Barton, in memory of Clyde Scott and Helen Barton Stilwell, to be known as the "Clyde Scott and Helen Barton Stilwell Memorial Bed"
George F. Cahill, M.D., Research bed in the Department of Urology
Mr. and Mrs. Charles P. Cooper, in memory of Mrs. Cooper's mother, Mrs. Charles Lathrop Parsons
Herman Goldman Foundation, Inc., in memory of Theresa and Frank Goldman
Williams-Adler Foundation Bed

Endowed Rooms

1903 Henry H. Rogers, known as "Room J"
1905 Mrs. Morris K. Jesup, to be known as the "Eliza De Witt Memorial Room"
1910 Mrs. John Stewart Kennedy, in memory of her husband, to be known as the "J. S. K. Memorial Room"
1912 Peter Cumming, to be known as "Peter Cumming Memorial Room"
1926 Alumnae Association of the School of Nursing of The Presbyterian Hospital, to be known as the "Amabel G. Roberts Memorial Room"

1928 Mrs. William Sloane, to be known as "The William Sloane Room for Graduate Nurses"
1930 The Sarah A. Hard Taylor Memorial Fund, to be known as "The Sarah A. Hard Taylor Room"
1935 Mrs. Herbert Neal, in memory of her husband, James Norman Hill, deceased
1937 S. Augusta Mora, in memory of her husband, Frank Mora, and mother, Sarah Robson Van De Water

Babies Hospital

1892 The Cribside Committee, known as "Cradyl-Nyst"
1894 Miss Ellen James Evans
Mrs. Henry G. Trevor
1895 Mrs. Evan T. Walker
Mrs. Richard Arnold, in memory of Georgiana Arnold
1897 Mr. and Mrs. Charles M. Fry, known as the "Mr. and Mrs. Charles M. Fry Bed"
Mrs. George Kemp, "For the use and purposes of the Hospital"
1898 Mrs. Oliver G. Jennings, known as the "Brewster Bed"
1899 Mr. and Mrs. John Sherman Hoyt, in memory of John Sherman Hoyt, Jr.
1900 Mrs. Elizabeth Chamberlin Lockwood, in memory of Emily Beaver Chamberlin
1902 Mr. and Mrs. W. E. Dodge, in memory of Grace Osborn
Henry P. Wertheim, in memory of Clara W. Wertheim
1904 Mr. and Mrs. George Arents, in memory of George Arents Brown
Estate of Mrs. Charles Harvey Hartman
1905 Mrs. J. Henry Lane
Mrs. Daniel S. Lamont, known as the "Julia Lamont Bed"
1907 The Cribside Committee
1908 Arthur W. Butler, in memory of Elizabeth Marshall Butler
1910 Dr. and Mrs. L. Emmett Holt, in memory of Kenneth M. Holt
Edwin Clarence Moller, in memory of Peter Moller
1911 Emily A. Watson, in memory of Wheeler Watson
Mrs. Bradley Martin, in memory of David Bradley Martin
1912 In loving memory of J. Bradley Cumings, endowed by his friends. "Greater love hath no man than this, that a man lay down his life for his friends."—*St. John 15:13*
1914 Mrs. Andrew Carnegie, in memory of Archibald Fraser Barrow
Mrs. Robert W. Todd, known as the "Mabel Todd Bed"
1916 Mr. and Mrs. John Chandler Moore, in memory of Edward de Béhian Moore
Mrs. John Hubbard, in memory of Margaret Fahnestock
Mrs. Clarence M. Hyde, known as the "Clara Mathewson Hyde Bed"
1917 Harris Brisbane Dick, known as the "Harris Brisbane Dick Free Bed"
Mrs. Edward S. Harkness, known as the "Thomas Stillman Taylor Bed"
Mr. and Mrs. Walter A. Hirsch, in memory of John Walter Hirsch
1919 Mr. and Mrs. Daniel Schnakenberg, in memory of their daughter, Anna Kate Bartlett
Mrs. John Jay Knox, in memory of John Jay Knox
Mrs. John Jay Knox, in memory of Dr. Reuel B. Kimball
1920 Mrs. Andrew Carnegie, "A thanks offering for Louise Carnegie Miller"
1921 The Estate of Jacob H. Schiff
1922 The Cribside Committee, in memory of Sarah Elizabeth Williams
Mr. and Mrs. Simon Guggenheim, in memory of their son, John S. Guggenheim
1923 Mr. and Mrs. Herman Armour Nichols, "In loving memory of Marie Louise Nichols"
1929 The Estate of Julia M. Stout
1930 Edith C. Thompson, in memory of her mother, Mrs. Grace H. Thompson
1934 West End Collegiate Church
1935 The Estate of Daniel Schnakenberg, in memory of his children, Daniel Schnakenberg, Jr., and Marie Schnakenberg
1936 The Estate of Carrie Guggenheim
1938 The Estate of Emily S. Hornblower, in memory of her stepdaughter, Susie Sanford Hornblower

1949 Dr. Frederic H. Bartlett, "Endowed in loving memory of Frederic H. Bartlett, M.D., 1872-1948, by his patients and other friends to commemorate his many years of faithful service in Babies Hospital"
1950 The Estate of Emelyn L. Coolidge, in memory of Marianna Wheeler and Emelyn L. Coolidge, M.D., to be known as "The Wheeler-Coolidge Bed"

Neurological Institute

1929 Red Cross Endowed Bed for Nurses
Rivington-Dwyer Endowed Room for Nurses
1943 Alice Dunning Starr, in memory of her husband, Allen Starr

Memorial Endowed Beds for Research Purposes

1952 Estate of John H. Babrenberg, in memory of John H. Bahrenburg and Elizabeth Bahrenberg (thirteen beds)

New York Orthopaedic Dispensary and Hospital

1883 Miss C. B. Hicks, continued in perpetuity by Buchanan Winthrop
1886 Mrs. Elizabeth Milbank Anderson, four beds, in memory of J. Milbank Anderson
1891 Alfred Corning Clark, three beds
Edward Severin Clark, two beds, to be known as the "Edward Severin Clark Beds"
Mrs. Henry S. Winthrop
1893 Mrs. William D. Sloane, in memory of William Douglas Sloane, Jr.
James K. Gracie, in memory of Anna Bulloch Gracie
Miss Sarah B. Gibbs
1894 Mrs. Richard Tylden Auchmuty, two beds, in memory of Richard Tylden Auchmuty
James H. Jones
1896 Mrs. William Astor, in memory of Helen Roosevelt
Mrs. Evan T. Walker, in memory of John J. Walker
1897 Mrs. William D. Sloane, two beds, one bed in memory of Maria Louise Vanderbilt and one in memory of Emilie Vanderbilt Burden
1898 Mrs. Charles B. Alexander, for her daughter, named the "Harriet Alexander Bed"
1901 Mrs. N. A. Baldwin, in memory of Louise Suydam Duer
Mrs. Benjamin Brewster, in memory of Benjamin Brewster
Henry T. Sloane, Jessie and Emily Sloane, bed endowed by their father
Mrs. Marion Story, in memory of M. Furman Hunt
1902 James Henry Smith, two beds, in memory of George Smith
Miss Emily A. Watson, in memory of Mrs. Mary J. Walker
1904 Miss Cornelia Prime, in memory of her brother, Temple Prime
Miss Helen Phipps
James K. Gracie, in memory of Esther Gracie Ogden
1906 Miss Caroline White
Mrs. M. Dwight Collier, in memory of Maurice Dwight Collier
1908 Mrs. H. N. Munn, Mrs. Augusta Munn Tilney and Orson D. Munn in memory of Henry Norcross Munn
1911 Estate of Everetta C. Whitney
Miss Josephine C. Smith, in memory of her father, Dr. Edward A. Smith, and her mother, Rebecca Miller Smith
1913 Estate of Marion de Forest Clark, in memory of Julian Bouton Clark
An anonymous donor, to be known as "Mary Townsend Cuyler Bed"
Carolina F. Butterfield, in memory of Frederick Falconer Butterfield
1915 Miss Emily Trevor
Mrs. Frederick W. Vanderbilt to be known as "The Louise Bed"
George Grant Mason, two beds, in memory of his uncle, James Henry Smith
1916 Henry M. Tilford, in memory of Catharine Hunt Tilford
Estate of Miss Clementine Furniss, to be known as the "Clementine Furniss Bed"
An anonymous donor

1917 Mrs. Charles H. Senff, in memory of her little son, Henry Senff
Mrs. A. Murray Young, in memory of her great uncle, Wilson G. Hunt
1919 R. Fulton Cutting, to be known as the "Helen Suydam Cutting Bed"
Mrs. Frederick Delano Hitch
Levi P. Morton, in memory of Anna Livingston Morton
Miss Georgiana G. R. Wendel, two beds, "In Memory of My Sister, Augusta A. S. Wendel"
Various donors, in memory of Theodore Roosevelt
1920 Mrs. John Hobart Warren
1921 Mrs. Winthrop W. Aldrich, in memory of her little son, Winthrop Williams Aldrich, Jr.
F. Ambrose Clark, to be known as "The Florence L. Clark Bed"
1922 Mrs. David T. Dana, in memory of her mother, Mrs. M. Dwight Collier
1924 Estate of Charlotte Bruce Bickmore, in memory of Albert Smith Bickmore, Jr.
Mrs. Louise Ward McAllister Lewis, in memory of her mother
1925 Miss Elizabeth J. Hofer, two beds, in memory of Horatio C. Kretchmar
Percy Chubb, in memory of his wife
Junior Red Cross of the Public Schools of New York
Mrs. Douglas Robinson, in memory of her friend, Charles Allen Munn
1926 Junior Red Cross of the Public Schools of New York
1927 Darrach Home for Crippled Children, in memory of Dr. May Darrach
1928 Mrs. Mary L. Schoonmaker, ten beds, in memory of Sylvanus Lothrop Schoonmaker and Frank Layng Schoonmaker
Estate of Henry D. Dickinson, in memory of Hathaway M. Dickinson
1930 James T. and Sarah Bancroft Leavitt, to be known as the "Mrs. James T. Leavitt Bed"
1934 Henry C. deRham, Frederic F. deRham and Clarisse deRham Rutherfurd, in memory of their parents, Charles and Emily Howe deRham
1935 Mrs. Percy R. Pyne and family, in memory of Meredith Howland Pyne
1936 Miss Elizabeth Stewart Hamilton, in memory of Mrs. John Hobart Warren, to be known as the "Harriette Mott Warren Bed"
Mrs. Edward S. Harkness, to be known as "Dorcas House Bed" in dear memory of Wilma Gideon
1938 Miss Grace Howard Potter, to be known as the "Howard and Mary Louisa Potter Bed," in memory of her father and mother
1955 Estate of Louise Lewis
General and Mrs. E. F. Maude in memory of Mrs. Maude's father Robert I. Brewster
Estate of Carrie Rosenshine, to be known as "The Lillie Rosenshine—Marjorie L. Kaufman Bed"

Endowed Rooms

1922 Glenn Ford McKinney, a ward room in the country branch, in memory of his wife, Jean Webster McKinney
1929 400 of his friends and associates, a room in the private pavilion, in memory of H. Le Roy von Lackum, M.D., surgeon in this hospital, 1916-1928

Herman Knapp Memorial Eye Hospital
(Institute of Ophthalmology)

1883 Mrs. Oswald Ottendorfer
1884 Miss Henrietta A. Lenox
1895 Miss Mary Morris van den Heuval
1897 Mrs. Giovanni Ceccarini
1913 Miss Catherine A. Bliss
Miss D. Willis James
1918 Truman Peck Stone
1921 Miss Rosie Bernheimer (In memory of her parents)
1923 Miss Mary Wiley (In memory of her brother, George Wiley)
1928 Mrs. Matilda Townsend Palmer
1931 Leo Doblin
1936 Charles M. Brooks

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Gifts and Bequests

The activities of the various hospitals at the Medical Center are supported to a substantial extent by the income from bequests and devises from friends of the various hospitals, who have desired to insure the continuation of their help to the sick of New York.

Bequests and devises may be made in the following form:

FORM OF BEQUEST

I give and bequeath to The Presbyterian Hospital in the City of New York the sum..... dollars ($.....) to be applied to the use and benefit of the said Hospital, under the direction of the Trustees thereof.

FORM OF DEVISE

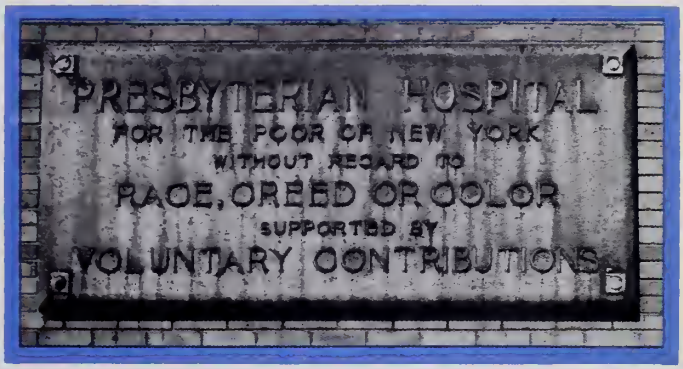
I give and devise to The Presbyterian Hospital in the City of New York all that, etc. (describe the property), to be had and holden to the said The Presbyterian Hospital in the City of New York, its successors and assigns, for the use and benefit of the said Hospital.

In case it is desired to make the bequest to the Hospital as a memorial "In memory of ....." may be added to the Form of Bequest or Devise.

In all instances the gift should be to "The Presbyterian Hospital in the City of New York" in its full corporate name even when mentioning the particular use to which it is to be put.

The corporation will, because of the consolidation of the corporations formerly administering the Medical Center hospitals, become entitled to gifts to the former corporations. It will, therefore, not be necessary to change the provisions of any will naming The Babies Hospital of the City of New York, Neurological Institute of New York or New York Orthopaedic Dispensary and Hospital as beneficiary.

EDWARD C. BENCH,
Treasurer.


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